Contractor Cost Data and Software Resources Reporting Manual

DRAFT
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FOREWORD

This Manual, DoD 5000.4-M-1, is issued under the authority of DoD Directive 5000.4, "Cost Analysis Improvement Group (CAIG)" (reference (a)) and DoD Instruction 5000.2, "Operation of the Defense Acquisition System" (reference (b)). It revises and replaces DoD 5000.4-M-1, "Contractor Cost Data Reporting (CCDR) Manual," April 1999 and subsequent draft updates, and DoD 5000.4-M-2, "Software Resources Data Reporting (SRDR) Manual," Draft, February 2003, and now serves as the primary requirements document for the development, implementation, and operation of the CCDR and SRDR systems.

The Manual provides background information and detailed requirements to implement the mandatory CCDR and SRDR policies established in DoD Directive 5000.4 (reference (a)) and DoD 5000.4-M, "Cost Analysis Guidance and Procedures" (reference (c)). It also incorporates recent changes to the policy documents listed above and DoD Directive 5000.1. "The Defense Acquisition System" (reference (d)), which are summarized in Chapter 2.

The Manual prescribes specific policies, procedures, and instructions that Government stakeholders in the CCDR and SRDR processes must follow. It also indicates the reporting provisions the stakeholders must include in contractual documents where appropriate.

The procedures in the Manual apply to the Office of the Secretary of Defense, the Military Departments, the Chairman of the Joint Chiefs of Staff, the Combatant Commands, the Office of Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the Department of Defense (hereafter referred to collectively as "the DoD Components").

While the Manual is not contractually binding, it becomes mandatory when referenced or included in contracts such as DD Form 1423-1, "Contract Data Requirements List" (CDRL) and the Data Item Description (DID). By following the Manual, you ensure the necessary data are not only accurate and consistent, but are quickly made available to DoD cost and software estimators.

Refer any questions, comments, or suggestions about the Manual to the Defense Cost and Resource Center (DCARC) by telephone (703-602-3301/3169), by fax (703-602-8944), or via the DCARC Web site (http://dcarc.pae.osd.mil).

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(a) DoD Directive 5000.4, "Cost Analysis Improvement Group (CAIG)," November 24, 1992 (Administrative Reissuance Incorporating Change 1, November 16, 1994)—currently undergoing revision

(b) DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003

(c) DoD 5000.4-M, "Cost Analysis Guidance and Procedures," December 11, 1992—currently undergoing revision

(d) DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003

(e) Military Handbook 881, "Work Breakdown Structures for Defense Materiel Items," January 2, 1998 (available at http://dcarc.pae.osd.mil/ccdr_wbs.htm)

(f) Defense Contract Audit Agency Manual 7640.1M, "DCAA Contract Audit Manual," Volume 2, January 2004 (available at http://www.dcaa.mil)

DEFINITIONS

DL1.1. Acquisition Program. A directed, funded effort designed to provide a new, improved, or continuing materiel, weapon, information system, capability, or service in response to a validated operational or business need. Acquisition programs are divided into categories, which are established to facilitate decentralized decision making, execution, and compliance with statutory requirements.

DL1.2. Actual Costs or "Actuals." The costs sustained in fact, on the basis of costs incurred, as opposed to standard, predetermined, or estimated costs. Actual costs to date include cost of direct labor, direct material, and other direct charges specifically identified to appropriate control accounts as incurred, and any overhead costs and general administrative expenses allocated to control accounts.

DL1.3. Airframe. The structural framework, including the wings, fins, and body assemblies, that provides the aerodynamic shape, mounting surfaces, and environmental protection for the aircraft and missile components.

DL1.4. Associate Contractor. An associate contractor is any prime contractor whose contract with the Government requires joint participation with other prime contractors to accomplish the Government's requirement. Joint participation involves the potential sharing of information, data, technical knowledge, expertise, and resources essential to the integration of the common requirement. Such participation is intended to ensure the greatest degree of cooperation to meet the terms of the contract in satisfying the common requirement.

DL1.5. Block. Units having a common standard configuration. A block may contain all the units in a single lot or it may be one of several blocks within one or more lots.

DL1.6. Equivalent Units. The total of completed units plus work completed on partially completed units translated into an equivalent number of totally completed units. Calculating equivalent units is especially important for system development and demonstration (SDD) contracts where a number of test units incur costs but may not be fully built into operational units.

DL1.7. Facilities Cost of Money. An imputed cost determined by applying a cost-of-money rate to facilities capital employed in contract performance. Capital employed is determined without regard to whether its source is equity or borrowed capital. The resulting cost of money is not a form of interest on borrowing.

DL1.8. Fee. In special cost-reimbursement pricing arrangements, an agreed amount beyond the initial estimate of costs. In most instances, fee reflects a variety of factors, including risk, and is subject to statutory limitations. Fee may be fixed at the outset of performance, as in a cost plus fixed fee arrangement, or it may vary (within a contractually specified range) during performance, as in a cost plus incentive fee arrangement.

DL1.9. General and Administrative (G&A). Indirect expenses related to the overall management and administration of the contractor's business unit, including the following: a company's general and executive offices; the cost of staff services such as legal, accounting, public relations, financial, and similar expenses; and other general expenses. G&A is also a generic term used to describe expenses whose beneficial or causal relationship to cost objectives cannot be more accurately assigned to overhead areas for engineering, manufacturing, material, and so on.

DL1.10. High-Risk Item. A selected Work Breakdown Structure (WBS) element that the Cost Working-Level Integrated Product Team (CWIPT) designates as being of higher-than-average risk in terms of cost, schedule, or technical performance. Key considerations in designating high-risk items are the importance of the cost drivers associated with them and the needed visibility into lower-level elements for future cost evaluations.

DL1.11. High-Technical-Interest Item. A selected WBS element that the CWIPT designates as having important technical consequences on a specific contract or program or on future contracts or programs (e.g., use of composites or introduction of a new production technology).

DL1.12. High-Value Item. A selected WBS element that constitutes 10 percent or more of total contract costs or that the CWIPT designates as being an important contributor to the system's overall cost. For example, the selected element may not meet the 10 percent contract criteria, but it still may be an important element over the life of the entire program or in estimating future programs.

DL1.13. Indirect Cost. An item of cost incurred for common or joint objectives that cannot be identified specifically with a single final cost objective (e.g., contract, product, services, program, function, or project) and is therefore not readily subject to treatment as a direct cost. Indirect cost is often used synonymously with overhead costs.

DL1.14. Indirect Labor. All labor costs that are classified as indirect.

DL1.15. Letter Contract. A preliminary contract containing basic terms agreed to at the time, with or without a tentative price. A letter contract authorizes the contractor to commence work, incur costs, and make commitments pending negotiation and execution of the definitive contract. It obligates the customer either to make a definitive contract within a specified time or to reimburse the contractor for costs incurred under the letter contract. The letter contract is superseded as soon as possible by a definitive contract.

DL1.16. Lot. A contractual group consisting of two or more units (e.g., unit number through unit number). A lot typically represents the quantity purchased in a single fiscal year (FY); however, a given FY buy may be subdivided into two or more lots if contractually preferable. Similarly, a lot is usually related to only one contract but may be associated with two or more.

DL1.17. Management Reserve. The amount of the total allocated budget that is held back for management control and risk purposes at the total contract level rather than designated for the accomplishment of specific tasks.

DL1.18. Manufacturing. The effort and costs expended in the fabrication, assembly, and functional testing of a product or end item. Manufacturing involves all the processes necessary to convert raw material into finished items.

DL1.19. Manufacturing Labor. Direct labor performed on the end item or product, including labor to make the parts used in the finished product and to perform functional testing. Manufacturing labor normally covers fabrication, assembly, and manufacturing support activities. It may also include tooling and quality control labor, which must be shown separately on DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report."

DL1.20. Material. Items that are raw, crude, or partially processed material or components that have not yet been made into a definite functional item or configuration. As a cost element, material consists of raw materials, purchased parts and equipment, subcontract items, and outside production items.

DL1.21. Material (Engineering). Material within the Engineering functional category that represents the cost of raw materials and purchased parts (e.g., printed circuit boards) evaluated or consumed in the performance of the Engineering function for the specified reporting element. Also included are engineering test and similar equipment (i.e., oscilloscopes, transducers, recorders, radio transmitters, converters, discriminators, and receivers) required to accomplish the Engineering function.

DL1.22. Material Overhead. The portion of indirect costs attributable to procured or subcontracted products, including the cost of purchasing, expediting, and storing materials, parts, equipment, and assemblies.

DL1.23. Materials (Raw) and Purchased Parts (Manufacturing). The costs of raw and semi-fabricated material plus purchased parts used in the manufacture of the specified reporting element. The purchased parts are essentially off-the-shelf items widely used in industry and supplied by a specialized manufacturer who has the proprietary right to the product. The following are examples of materials and purchased parts: raw materials in typically purchased forms and shapes (sheets, bars, rods, etc.); semi-fabricated materials in typically purchased forms and shapes (wires, cables, fabrics, conduits, tubing, sealing strips, fiberglass, windshield glass, etc.); raw castings and forgings; manufactured proprietary clips, fasteners, hose clamps and assemblies, and seat belts; standard and proprietary valves, cocks, and hydraulic and plumbing fittings and fixtures; and standard electrical fittings (conforming to underwriters' and other standard specifications). Purchased parts are distinguished from purchased equipment by cost and complexity.

DL1.24. Materials and Purchased Tools (Tooling). The costs of the new (basic, processed, or semi-fabricated) material used in the manufacture of dies, jigs, fixtures, gauges, handling equipment, work platform, and test equipment for fabrication and testing. Also included are the costs of tools the reporting contractor normally purchases, such as special welding heads, X-ray heads, attaching fixtures, control panels, and consoles, that require negligible in-house effort to assemble into the final tool configuration.

DL1.25. Mock-Up. A partial or full-scale replica of an article or its components, usually constructed of cheaper materials than required in the finished product. A mock-up is used to provide physical interfaces between structure and various electronic, hydraulic, pneumatic, electrical, and similar systems.

DL1.26. Nonrecurring Costs. Elements of development and investment costs that generally occur only once in the life cycle of a system. Such costs are often found in engineering, system test, tooling, and pre-production activities, and also include basic design and development through first release of engineering drawings and data, all system and subsystem test activities (except end-item acceptance testing), configuration audits, qualification testing, technical publications through initial release, basic tool and production planning through initial release, all basic tooling, engineering models, partially built units for development or test purposes only, units not built to operational configuration, and specialized work force training. It can also include nonrecurring design work in production where the contractor is incorporating configuration or production line changes.

DL1.27. Nonreporting Subcontractor. A company that has a subcontract without CCDR reporting requirements with a company whose prime contract contains CCDR reporting requirements.

DL1.28. Other Costs Not Shown Elsewhere. Costs not allocated to the categories of Engineering, Tooling, Quality Control, Manufacturing, and Purchased Equipment. Costs may include such items as security, royalty, license fees, transportation, preservation, packaging, and any applicable Federal excise tax.

DL1.29. Other Direct Charges (Engineering). Direct costs of travel, per diem, shift and overtime premiums, automatic data processing, reproduction of printed material, rental of special test facilities and equipment, and other engineering items not allocated to the categories of Direct Labor and Material.

DL1.30. Other Direct Charges (Manufacturing). Direct costs of travel, per diem, fire and extended coverage insurance, shift and overtime premiums, rental of special facilities and equipment, shipping, and transportation for items sent or returned to subcontractors, extraordinary expenses associated with operating off-site test bases, and other manufacturing costs not allocated to the categories of Direct Labor, and Materials and Purchased Parts.

DL1.31. Other Direct Charges (Quality Control). Direct costs of travel, per diem, shift and overtime premiums, automatic data processing, reproduction of printed material, and other quality control items not allocated to the categories of Direct Labor and Material.

DL1.32. Other Direct Charges (Tooling). Direct costs of travel, per diem shift premium, overtime, premiums, rental of equipment, and other tooling items not allocated to the categories of Tooling, Direct Labor, Material, and Purchased Tools.

DL1.33. Outside Production. A special category of Airframe subcontracts. All Airframe subcontracts are distributed by function in Outside Production and Services, either among all categories or as purchased equipment. The following guidelines apply (even when make-or-buy decisions change during contract execution): (1) all subcontracts for items or services normally produced or performed in airframe plants must be distributed as appropriate among all functional categories of cost whether the particular contractor makes or buys the items; (2) all subcontracts for items falling within the definition of Purchased Equipment as described by the special instructions for Airframe reporting in Appendix 1 must be included as purchased equipment whether the particular contractors make or buy the items; and (3) final entries must be included with the subcontractor's G&A and profit or fee.

DL1.34. Overhead. All indirect costs, except G&A expenses, that are properly chargeable for the specified reporting element. (See Indirect Costs.)

DL1.35. Production Program. Includes all activities related to the fabrication, assembly, and delivery of a system in specified quantities of useable end items, support equipment, training, data, modifications, and spares. Other production activities include the following: revision of final manufacturing drawings resulting from qualification testing or for incorporation of different manufacturing methods; manufacture or procurement of production tooling; full production of all components, subsystems, and systems, including parts and equipment manufactured in-house and subcontracted; and acceptance testing.

DL1.36. Profit/Loss Or Fee. Profit is the excess of revenues over expenses in fixed-price contracts. Loss is the excess of expenses over revenue in contracts that contain limited Government liability such as fixed-price contracts and cost plus contracts with cost ceilings. In special cost-reimbursement pricing arrangements, fee is a form of profit representing an agreed-to amount beyond the initial estimate of costs that reflects a variety of factors, including risk, and is subject to statutory limitations. Fee may be fixed at the outset of performance, as in a cost plus fixed fee arrangement, or may vary (within a contractually specified minimum-maximum range) during performance, as in a cost plus incentive fee arrangement.

DL1.37. Purchased Equipment. Manufactured and assembled items the contractor procures from outside sources that are required for installation in the reporting element. Such equipment normally costs over $1,000 per unit and exhibits a wide range of

complexity. Examples of purchased equipment for large weapon systems are multipurpose hydraulic and pneumatic pumps, motors, generators, air conditioning equipment, batteries, landing gear, instruments, pedestals, and so on. Where the reporting contractor specifically controls the design of such equipment for the unique requirements of the WBS element, purchased equipment is considered as subcontracted and reported as such. Subcontracts for items falling within the definition of Purchased Equipment as described by the special instructions for Airframe reporting in Appendix 1 must be included as purchased equipment whether the particular contractor makes or buys the items.

DL1.38. Quality Control. Activities that check, physically inspect, measure, and test the product. Quality control efforts typically focus on manufacturing, shops, receiving and shipping, and records that are necessary to assure that hardware, end items, parts, components, processes, and tests are being fabricated, assembled, and tested in accordance with engineering drawings and specifications.

DL1.39. Recurring Costs. Repetitive elements of development and investment costs that may vary with the quantity being produced during any program phase. For example, during the development phase, repetitive production-like costs incurred when producing prototype and test units are considered recurring costs. Recurring costs include the following: engineering required for redesign, modifications, reliability, maintainability, and associated evaluation and liaison; complete reporting elements produced either for test or for operational use; tool maintenance, modification, rework, and replacement; training all Military Service personnel to operate and maintain equipment; and reproduction and updating of technical data and manuals.

DL1.40. Reporting Element. A defined task or contract item on which data are to be collected. Examples include individual elements of a Work Breakdown Structure as defined in Military Handbook 881 (MIL-HDBK-881), “Work Breakdown Structures for Defense Materiel Items, January 2, 1998 (reference (e)); general and administrative (G&A) expenses; and profit/loss or fee.

DL1.41. Software Cost. Software is the set of computer programs and accompanying documentation developed under a given contract. Development activities include specifying software requirements, design, coding, testing, and integration. Software cost includes the internal cost of developing and documenting lines of code for both original programs and modifications to existing software (contractor-developed, Government-furnished, or commercial). The cost of commercial software will also be included if delivered to and paid for by the Government. Software costs do not include the cost of any contractor infrastructure software used to support other development (e.g., compilers, editors, and operating systems) that is not part of the deliverable.

DL1.42. Subcontract. Any agreement, purchase order, or instrument other than a prime contract calling for work or for the material required for the performance of one or more prime contracts. It usually covers procurement of major components or subsystems that require the subcontractor to do extensive design, development, engineering, and

testing to meet a prime contractor's procurement specifications. A company that has a subcontract without CCDR reporting requirements with a company whose prime contract contains CCDR reporting requirements is referred to as a "nonreporting subcontractor."

DL1.43. Tooling. The original equipment and manufacturing aids that a contractor acquires, manufactures, or replaces in the performance of a contract. Examples include jigs, dies, fixtures, molds, patterns, and special gauges. These tools, sometimes called special tools, are of such a specialized nature that their use is limited to the production of supplies or parts or the performance of services that are particular to the needs of the customer. In military business, the "title" for tooling resides with the customer; in commercial practice, the "title" resides with the contractor. Tooling costs will also be subdivided into recurring and nonrecurring components. Nonrecurring tooling costs consist of all design and development costs through initial release of basic tooling. Recurring tooling costs are generally related to sustaining tooling that involves the maintenance, repair, modification, and replacement of basic tooling after initial release.

DL1.44. Undistributed Budget. The portion of the budget applicable to program effort that has not yet been allocated to control account budgets or to management reserve.

DL1.45. Unit. Individual reporting by unit number (e.g., tail number for aircraft). Such reporting is generally prescribed when specific characteristics, measurements, or other specific data are required of individual units (e.g., weight of an aircraft).

ABBREVIATIONS

ACAT	Acquisition Category
AOA	Analysis of Alternatives
AUW	Airframe Unit Weight
CA	Cost Analyst
CAIG	Cost Analysis Improvement Group
CAIV	Cost As an Independent Variable
CARD	Cost Analysis Requirements Description
CCA	Component Cost Analysis
CCDR	Contractor Cost Data Reporting
CCDRs	Contractor Cost Data Reports
CCDR-PO	Contractor Cost Data Reporting Project Office
CDA	Central Design Activity
CDRL	Contract Data Requirements List
CER	Cost Estimating Relationship
CMM	Capability Maturity Model
COTS	Commercial Off-the-Shelf
CPAF	Cost Plus Award Fee
CPFF	Cost Plus Fixed Fee
CPIF	Cost Plus Incentive Fee
CPIF/AF	Cost Plus Incentive Fee/Award Fee
CPSR	Contractor Purchasing System Review
CRS	Central Repository System
CS	Cost Sharing
CSDR	Cost and Software Data Reporting
CSDRs	Cost and Software Data Reports
CWBS	Contract Work Breakdown Structure
CWIPT	Cost Working-Level Integrated Product Team
DACIMS	Defense Automated Cost Information Management System
DAES	Defense Acquisition Executive Summary
DCAA	Defense Contract Audit Agency
DCARC	Defense Cost and Resource Center
DCMA	Defense Contract Management Agency
DFARS	Defense Federal Acquisition Regulation Supplement
DID	Data Item Description
DoD	Department of Defense
DUNS	Dun and Bradstreet's Universal Numbering System
EAC	Estimate At Completion
EDI	Electronic Data Interchange
EVMS	Earned Value Management System
FAR	Federal Acquisition Regulation
FCP/RPR	Fixed Ceiling Price with Retroactive Price Redetermination
FFRDC	Federally Funded Research and Development Center
FFP	Firm Fixed Price
FP/AF	Fixed Price with Award Fee

FP/EPA	Fixed Price with Economic Price Adjustment
FP/PPR	Fixed Price with Prospective Price Redetermination
FP/RPD	Fixed Price with Retroactive Price Determination
FPIF	Fixed Price Incentive Fee
FPIS	Fixed Price Incentive Successive
FPR	Forward Pricing Rate
FPRA	Forward Pricing Rate Agreement
FPRP	Forward Pricing Rate Proposal
FPRR	Forward Pricing Rate Recommendation
FRP	Full-Rate Production
FY	Fiscal Year
G&A	General and Administrative
GOTS	Government Off-the-Shelf
GUI	Graphical User Interface
HTTPS	Hypertest Transfer Protocol Secure
IBR	Independent Baseline Review
ICE	Independent Cost Estimate
IR	Infrared
LC	Letter Contract
LOET	Level of Effort Term
LRIP	Low-Rate Initial Production
MAIS	Major Automated Information System
MD	Materiel Developer
MDAP	Major Defense Acquisition Program
MIL-HDBK	Military Handbook
MIL-STD	Military Standard
MOU	Memorandum of Understanding
MTTD	Mean Time to Defect
MTTF	Mean Time to Failure
MYP	Multi-Year Procurement
NCAD	Naval Cost Analysis Division
NDA	Non-Disclosure Agreement
OFP	Operational Flight Program
OIPT	Overarching Integrated Product Team
OMB	Office of Management and Budget
OSD	Office of the Secretary of Defense
PA&E	Program Analysis and Evaluation
PCO	Procuring Contracting Officer
PDSS	Post-Deployment Software Support
PEO	Program Executive Officer
PKI	Public Key Infrastructure
PM	Program Manager
POC	Point of Contact
POE	Program Office Estimate
PSM	Practical Software and Systems Measurement
PWBS	Program Work Breakdown Structure

RAM	Responsibility Assignment Matrix
R&D	Research and Development
RDT&E	Research, Development, Test and Evaluation
RFP	Request For Proposals
RGP	Rate Gyro Package
S/MIME	Secure/Multipurpose Internet Mail Extensions
SAE	Service Acquisition Executive
SAR	Selected Acquisition Report
SDCE	Software Development Capability Evaluation
SDD	System Development and Demonstration
SE	Systems Engineering
SEA	Seeker Electronics Assembly
SEI	Software Engineering Institute
SMWG	Software Metrics Working Group
SOW	Statement of Work
SRDR	Software Resources Data Reporting
SRDRs	Software Resources Data Reports
SSL	Secured Socket Layer
TIF	Tagged Image File
WBS	Work Breakdown Structure
WIP	Work-In-Process
XML	Extensible Markup Language

C1. CHAPTER 1
INTRODUCTION AND BACKGROUND

C1.1. INTRODUCTION

C1.1.1. The Cost and Software Data Reporting (CSDR) system is the product of over 50 years of events and decisions within the defense community that have affected the quality and utility of the data the system contains. The two principal components of the system are Contractor Cost Data Reporting (CCDR) and Software Resources Data Reporting (SRDR). This Manual, developed jointly by the Office of the Secretary of Defense (OSD) and the Military Services with industry participation, is the primary source of information about operation and use of the CSDR system. The CSDR policies and business rules in this Manual result largely from the ongoing joint efforts of the Department of Defense and industry stakeholders under the leadership of the Defense Cost and Resource Center (DCARC) to reengineer the CCDR process and to develop the new SRDR process. Their focus is on improving the quality, utility, and availability of the data for the purposes of estimating cost. At the same time, they constantly review methods to streamline reporting and minimize the burden on DoD contractors and those in Government offices who submit data.

C.1.1.2. This Manual incorporates changes made in DoD Directive 5000.1, "The Defense Acquisition System" (reference (d)), and DoD Instruction 5000.2, "Operation of the Defense Acquisition System" (reference (b)). Consequently, the Manual describes and explains the requirements regarding the collection and reporting of software element data on major DoD software-intensive systems. The data collection and reporting applies to both developments and upgrades, whether performed under a commercial contract or by a Government Central Design Activity (CDA), under the terms of a Memorandum of Understanding (MOU), or by a combination of both.[1]

C.1.1.3. The Manual restates mandatory requirements found in reference (b) and contains CSDR requirements and instructions for contractors, program offices, and other stakeholders to facilitate CSDR planning and reporting. It also ensures that contract planning is adequate and that appropriate contractual language is used to make the intended reporting requirements contractually binding.

C1.2. CCDR BACKGROUND AND PURPOSE

C1.2.1. A system for accumulating actual contractor costs is necessary for the Department of Defense to analyze costs efficiently and effectively. Actual cost experiences on past and current acquisition programs form the bases of projections of the costs of future systems. There are no alternatives to this practice. When defense cost analysts are faced with projecting future costs, they need to get actual costs (or "actuals") one way or another. Furthermore, the need for actuals increases as defense cost analysts face the challenges of changing budget and military weapon system requirements.

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[1] Within this Manual, the term *contract* refers to either a formal contract or an MOU.

C1.2.2. More than 40 years ago, the Department of Defense committed itself to systematically collecting actual costs rather than relying on ad hoc, unmanaged, and inefficient methods. Building on its predecessors, CCDR is the current DoD collection system for actual costs. This collection system is intended to feed the Department of Defense's cost analysis database that is expected to service all DoD cost analysis and program management offices.

C1.2.3. If the Department of Defense reverted to its former ad hoc, unmanaged method of actuals collection, the overall cost of performing cost analysis within the Department of Defense could be expected to rise substantially. Other undesirable effects would include the following: limited application with nonstandard data focus; uncoordinated, inefficient, and duplicative collection activities; lower productivity in cost analysis offices; more disruption of contractor activities; increased cost to obtain actuals; fragmented data in nonstandard form; inability to identify previously collected data; and inability to easily gain access to data. The loss of data would lead to reduced ability to perform accurate and timely estimates that can cause inaccurate budget forecasts, unplanned reprogramming, and delays of several years in providing systems to warfighters in military useful quantities.

C1.2.4. The main purpose of CCDR is to serve as the primary contract cost database for most DoD efforts to estimate cost. The database can be used in estimating total program acquisition costs (includes work preformed by both contractors and the Government), the total of all program contracts (awarded and future) for a particular contractor (referred to as contractor program estimate), and individual contract costs. More specifically, the DoD Components are required to use Contractor Cost Data Reports (CCDRs) to do the following: prepare acquisition cost estimates for major system milestone reviews;[2] develop independent Government contract cost estimates in support of cost and price analyses; and develop estimates to support Analyses of Alternatives (AOAs), Cost as an Independent Variable (CAIV), and long-range planning efforts.

C1.2.5. The nature of these estimates can differ substantially depending on the point in time the estimate is made, where time is measured in terms of the life of the acquisition program. Early in a program's life (Milestone A, entry into the Concept and Technology Development Phase), the weapon system is usually described broadly in terms of its performance characteristics (e.g., range, speed, and payload). At such times, few technical details are firmly established. At this point, cost estimates are usually derived at

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2 This purpose refers to the activities of cost analysis organizations that prepare cost estimates for major weapon systems that are ultimately presented to the Defense Acquisition Board and Component Acquisition Executive at system milestone reviews. These estimates include Program Office Estimates prepared by or for system Program Managers in the military departments, Component Cost Analyses prepared by military Service organizations other than the program offices (usually Service cost centers or agencies), and Independent Cost Estimates prepared mainly by Service cost centers and the Cost Analysis Improvement Group.

the weapon system flyaway/rollaway level[3] using parametric estimating methods that use performance characteristics as independent variables.

C1.2.6. CCDR addresses the need for cost estimates during contracting, particularly for the system development and demonstration, production, and deployment phases of an acquisition. During contracting, more is known about the physical and technical characteristics of the system. Armed with more detailed descriptions of the system and its component parts, cost analysts rely on Cost Estimating Relationships (CERs), methods that relate physical and technical characteristics to cost as well as engineering build-up methods. In developing such estimates, weapon systems are described in terms of Program Work Breakdown Structure (PWBS) and Contract Work Breakdown Structure (CWBS). Separate estimates are usually prepared for individual WBS elements; some estimates correspond to separate contracts and others correspond to line items in contracts. Estimates of the costs of these elements are intended to aid in contract negotiations. These component estimates are then combined with other data to arrive at a system-level estimate.

C1.3. SRDR BACKGROUND AND PURPOSE

C1.3.1. The purpose of collecting software data is to improve the Department of Defense's ability to estimate the costs of software-intensive programs. Representatives from the Service cost centers collaborated with the Office of the Secretary of Defense (OSD), Program Analysis and Evaluation (PA&E), to identify appropriate data to collect from DoD software-intensive systems. Software-intensive systems covered by the data collection include major defense acquisition programs, that is, those classified as Acquisition Category (ACAT) IC and ID programs. Data collected from applicable programs will be limited to the type and size of the software application, the schedule and labor resources needed for its development, and (optionally) the quality of the delivered software.

C1.3.2. DoD cost analysts estimate the resources required for software systems using a variety of methods. Many analysts rely on tools that require input such as the estimated size and type of an application, the language used, the experience of the development team, and the required reliability. These methods and tools typically yield resource and schedule estimates based on relationships derived from the past performance of a set of programs. A less formal estimating methodology that is also commonly employed depends on analogy—using historical data of similar projects to predict outcomes of future programs. In either case, cost analysts need historical data that reflect actual experience.

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[3] Flyaway/rollaway includes three of the level 2 Work Breakdown Structure elements in Military Handbook 881 (MIL-HDBK-881) (reference (e)) (prime mission equipment, system engineering/program management, and system test and evaluation). The remaining level 2 elements (training, common support equipment, peculiar support equipment, data, operational site activation, initial spares, and facilities) are excluded.

C1.3.3. An experience base of software development data within OSD will become particularly important as new development methods and processes are used on software programs. Without knowledge of other similar projects, analysts are unable to judge the relevance of their estimating methods to the new regimes of software development. The centralization of data from new development methods will enable more analysts to make use of the results. Accordingly, the DoD Service cost center managers requested that the Cost Analysis Improvement Group (CAIG) in the Office of the Director, Program Analysis and Evaluation (PA&E), in OSD research how the DoD cost analysis community could obtain better measurements of the Department's software projects in order to improve their software cost estimates.

C1.3.4. Over time, cost analysts will be able to improve their predictions of project efforts and schedules by developing relationships relating size, schedule, effort, and quality for various application types, development environments, and other project characteristics. Commercial models for software estimating are also widely used by DoD analysts, and the accuracy of these can be improved through calibration with the actual experiences reported under the proposed data collection. Using historical data from similar systems, analysts will be able to make realistic projections of the expected sizes of new systems. More realistic size estimates will, in turn, result in better effort and schedule estimates.

C1.4. REPORTING FORMS

The CSDR system are DD Form 2794, "Cost and Software Data Reporting Plan," (commonly referred to as the "CSDR Plan") and two sets of reports, the Contractor Cost Data Reports (CCDRs) and the Software Resources Data Reports (SRDRs). The CCDRs are DD Form 1921, "Cost Data Summary Report," and DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report." (Previous forms DD Form 1921-1, "Functional Cost-Hour Report," and DD Form 1921-2, "Progress Curve Report," were consolidated into one report as of October 1, 2003.) The SRDRs are DD Form 2630-1, "Software Resources Data Report: Initial Government Report," DD Form 2630-2, "Software Resources Data Report: Initial Developer Report," and DD Form 2630-3, "Software Resources Data Report: Final Developer Report."

C2. CHAPTER 2
REPORTING REQUIREMENTS

C2.1. INTRODUCTION

C2.1.1. DoD Directive 5000.1, "The Defense Acquisition System" (reference (d)), and DoD Instruction 5000.2, "Operation of the Defense Acquisition System" (reference (b)), provide mandatory policies and procedures for managing acquisition programs, except when statutory requirements override. If there are any conflicting requirements pertaining to contracting, the current edition of the Federal Acquisition Regulation (FAR) or the Defense Federal Acquisition Requirement Supplement (DFARS) takes precedence.

C2.1.2. Reference (d) authorizes publication of reference (b) and establishes policies and principles for all DoD acquisition programs. Reference (b) establishes a simplified and flexible approach for managing all acquisition programs and implements reference (d). It also makes the CAIG responsible for preparing independent cost estimates on all ACAT ID programs and on any ACAT IC programs requested by the Under Secretary of Defense (Acquisition, Technology, and Logistics). DoD Directive 5000.4, "Cost Analysis Improvement Group (CAIG)" (reference (a)), requires the CAIG "to establish policy guidance on the CCDR System, and to monitor its implementation to ensure consistent and appropriate application throughout the DoD."

C2.2. GENERAL CSDR REQUIREMENTS

C2.2.1. CSDR reporting and processing requirements shall be determined by ACAT program category (see reference (d) for specific guidelines) and the value of individual contracts and subcontracts within the program. See sections C2.3 and C2.4 for specific value thresholds for Contractor Cost Data Reports (CCDRs) and Software Resource Data Reports (SRDRs), respectively.

C2.2.2. CSDR coverage generally extends from Milestone B or the equivalent to the completion of production. CCDRs are also required on advanced development prototype programs that occur during the Concept and Technology Development phase (pre-Milestone B).

C2.2.3. Flexibility of the CSDR System. The CSDR planning and reporting process shall remain flexible to accommodate the Department of Defense's preferred evolutionary acquisition strategy to include both spiral and incremental development approaches.

C2.3. CCDR-SPECIFIC REQUIREMENTS

CCDRs are required on all ACAT IC and ID contracts and subcontracts, regardless of contract type, valued at more than $50 million (FY 2002 constant dollars). CCDRs can be required for high-risk or high-technical-interest contracts that are priced

between $7 million and $50 million (FY 2002 constant dollars) if needed for cost estimating. CCDR reporting is not required on contracts priced below $7 million (FY 2002 constant dollars). These reporting requirements also apply to individual WBS elements within ACAT IC or ID programs that are separately managed by other Government Program Managers (PMs). These WBS elements retain the ACAT designation of the parent IC or ID programs and are subject to the same reporting thresholds and requirements as those elements that are directly managed by the parent IC or ID PMs.

C2.3.1. Level of Reporting

Routine CSDR reporting shall be at CWBS level 3 for prime contractors and subcontractors to include all lower tiers. Only lower-level elements that address high-risk, high-value, or high-technical-interest areas of a program shall require detailed reporting below level 3 as proposed by the Cost Working-Level Integrated Product Team (CWIPT) and approved by the CAIG Chair.

C2.3.2. Report Timing

CCDRs are fundamentally a system for reporting "returned" (or actual) costs. For development contracts, reporting contractors typically shall submit CCDRs after such major events as first flight or completion of prototype lot fabrication, before major milestones, and upon contract completion. In general, quarterly, semiannual, and annual reporting do not meet the above guidance. For production, reporting contractors normally shall submit CCDRs upon the delivery of each annual lot for all weapon systems. Due to the extended construction process for ships, CCDRs are also required on the first ship of each class at three intervals (i.e., within 180 days of contract award, at completion of mid-design, and after final delivery).

C2.4. SRDR-SPECIFIC REQUIREMENTS

C2.4.1. SRDRs are required on ACAT IC and ID programs that require a projected software development effort greater than $25 million (FY 2002 constant dollars). This requirement applies to all contracts and subcontracts, regardless of contract types, for contractor effort. Also, the program office may choose to combine a set of smaller releases within a contract into a single release for reporting purposes. Separate software element developments within a single contract may be reported on separately or, at the discretion of the Government, may be aggregated. Data for subcontracts for less than $25 million (FY 2002 constant dollars) for similar software development efforts should also be aggregated onto one or more reports.

C2.4.2. These reporting requirements also apply to individual WBS elements within ACAT IC or ID programs that are separately managed by other Government PMs. These WBS elements retain the ACAT designation of the parent IC or ID programs and are subject to the same reporting thresholds and requirements as those elements that are directly managed by the parent IC or ID PMs.

C3. CHAPTER 3
STAKEHOLDER RESPONSIBILITIES

Each stakeholder in the CSDR system plays an important role in planning and implementation.

C3.1. COST ANALYSIS IMPROVEMENT GROUP

The Cost Analysis Improvement Group (CAIG) Chair is responsible for establishing CSDR policies and processing requirements for administering all ACAT IC and ID programs. Specific responsibilities are delineated in the following subparagraphs.

C3.1.1. The CAIG Chair shall approve all ACAT IC and ID program and contract CSDR Plans and any subsequent changes before issuing a solicitation to industry and, if there are any changes, awarding the contract. Changes subsequent to contract award also require CAIG Chair approval. CAIG approval action must occur within 14 days of the formal request for approval.

C3.1.2. The CAIG Chair can waive CCDR on competitively awarded firm fixed price contracts on procurement of commercial systems or for noncommercial systems as long as competitive conditions continue to exist.

C3.2. SERVICE COST CENTERS

Service cost centers shall designate a cost analyst to be on the Cost Working-Level Integrated Product Team (CWIPT) for each of their DoD Component programs, and they shall assess the need for on-site CSDR contract reviews after final Cost and Software Data Reports (CSDRs) are received for programs lower than ACAT I.

C3.3. SERVICE-DESIGNATED CSDR REPRESENTATIVE

The Service-designated CSDR representative shall designate, by title, an official to do the following: ensure that policies and procedures are established for implementing the CSDR system in accordance with these instructions, including storage of CSDR submissions and distribution to appropriate DoD officials; review all ACAT IC and ID CSDR Plans and Plan changes for compliance with CSDR policy and submit them to the DCARC for review and submission to the CAIG Chair for approval; advise the CAIG Chair annually through the DCARC on the status of all Service CSDRs and on delinquent or deficient reporting and remedial action being taken.

C3.4. COST WORKING-LEVEL INTEGRATED PRODUCT TEAM

The CWIPT shall identify cost analysis requirements for programs and contracts to facilitate the preparation of timely, high-quality cost estimates and shall advise the DoD Program Manager (PM) accordingly. The CWIPT also has the specific responsibility to coordinate within the DoD Component in accordance with established

CSDR policies and procedures. The CWIPT typically should include but not be limited to designated cost analysts from the CAIG, the DoD Component cost center/agency, the DoD Component commodity command/center, the program office, and the representative contractors, as appropriate. The CWIPT generally includes participation by the PM's Earned Value Management System (EVMS) and Systems Engineering (SE) representatives to assist in building the WBS. The need for additional EVMS and SE participation at other DoD levels is left to the discretion of the PM and the CWIPT. Other parties with an interest in CSDR implementation are encouraged to participate in the CWIPT deliberations regarding CCDR requirements. The DoD Component is responsible for identifying an analyst to participate in the CWIPT effort. As the DoD PM's agent, the CWIPT has other responsibilities, which are explained in the following paragraph and its subparagraphs.

C3.5. DOD PROGRAM MANAGERS (AND THE CWIPT)

DoD PMs shall prepare and obtain approval for program and contract CSDR Plans, place approved CSDR Plan requirements on contract, and ensure that contractors comply with the CSDR contractual provisions. Specific responsibilities are delineated in the following subparagraphs.

C3.5.1. As the DoD PM's agent, the CWIPT shall begin planning for CSDR reporting between 8 and 12 months before the Overarching Integrated Product Team (OIPT) Milestone B review. The PM shall ensure that all the appropriate CSDR stakeholders for ACAT IC and ID programs are included in the CWIPT planning process.

C3.5.2. As the DoD PM's agent, the CWIPT shall complete the draft Program CSDR Plan and product-oriented WBS Dictionary in time to meet the earlier of the following two events: submission of the program CSDR Plan with the draft CARD to the CAIG (which is due approximately 180 days before the OIPT meets) while simultaneously submitting a copy to the DCARC, or no later than 60 days before the solicitation to industry. The DoD PM shall forward all program and contract CSDR Plans to the DCARC for CAIG Chair approval and shall include a cover memorandum (e-mail is sufficient) that identifies those individuals and organizations outside the PM's organization that coordinated on the plan (e.g., CWIPT members and Service cost center representatives).

C3.5.3. As the DoD PM's agent, the CWIPT shall determine, when justified for purposes of cost estimating, the CCDR requirements to be placed on high-risk or high-technical-interest contracts priced between $7 million and $50 million (FY 2002 dollars).

C3.5.4. As the DoD PM's agent, the CWIPT shall determine CCDR frequency to meet the needs of the program for cost data early in CSDR planning.

C3.5.5. In coordination with the CWIPT, the DoD PM shall develop the WBS in accordance with the product-oriented structure in MIL-HDBK-881 (reference (e)) but can deviate from this guidance if justified by unique programmatic requirements. Based upon

the advice of the CWIPT, the PM shall ensure that there is only one program WBS and one contract WBS for each contract. The program WBS submitted with the CARD shall agree with the program CSDR Plan WBS as noted in reference (c). Any differences must be identified and explained when the later of the two documents is submitted.

C3.5.6. In coordination with the CWIPT, the DoD PM shall prepare the Responsibility Assignment Matrix (RAM), Project Applicability Matrix, and Technical Characteristics for inclusion in the remarks section of the program CSDR Plan. See paragraph C5.3.18 and its subparagraphs for specific requirements.

C3.5.7. The DoD PM, in coordination with the CWIPT, shall ensure the applicable sections of the approved program CSDR Plan are contained in the draft contract CSDR Plan used in the solicitation to industry.

C3.5.8. In accordance with DFARS paragraph 215.403-5, the DoD PM, shall require reporting contractors to submit DD Form 1921, "Cost Data Summary Report," or DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report," in response to the solicitation when CCDR requirements are to be placed on contract. The PM shall make every effort to keep the reports to a minimum to help streamline solicitation responses. The PM shall incorporate the content of the approved CSDR Plan and WBS Dictionary into the solicitation.

C3.5.9. Before issuing the Request for Proposals (RFP), the DoD PM shall forward to the DCARC an extract of the RFP that contains CSDR requirements for review.

C3.5.10. The DoD PM shall forward one copy of the items on DD Form 1423-1, "Contract Data Requirements List" (CDRL) that establish the WBS, the WBS Dictionary, and the CSDR requirements to the DCARC within 30 days after the contract containing such requirements is awarded. Signed CDRL items must be submitted in electronic form.

C3.5.11. If changes are made during the solicitation and response process, the DoD PM shall revise the contract CSDR Plan, update the program CSDR Plan if necessary, and forward both to the DCARC for final review and approval before contract award. For subcontractors with reporting requirements that refer to the prime contractor's CSDR Plan, the prime contractor shall electronically forward the reference and the proposed subcontractor's CSDR Plan to the DoD PM. The PM, in turn, shall review and forward the electronic documents to the DCARC within 15 days of receipt.

C3.5.12. The DoD PM, or the designated DoD Component representative, shall provide the status of CSDR processing, including the CSDR Plan and any applicable previous CSDR, at the CAIG review held 21 days before the OIPT review.

C3.5.13. The DoD PM, in coordination with the CWIPT, shall submit the final Program CSDR Plan and WBS Dictionary with the final CARD to the CAIG and the DCARC 45 days before the OIPT review.

C3.5.14. The DoD PM shall assist the DCARC in ensuring that reporting contractors promptly resolve all reporting deficiencies identified by the DCARC during the validation process.

C3.5.15. The DoD PM shall coordinate any proposed revisions to the approved Plan with the CWIPT before submission to the DCARC for CAIG review and approval prior to contract award. The PM shall include the approved CSDR Plan requirements in the contract award and ensure that contracting officials do not deviate from them.

C3.5.16. The DoD PM shall file CSDR reporting concerns and comments through the DCARC.

C3.5.17. PMs that are required to submit quarterly Defense Acquisition Executive Summary (DAES) reports must evaluate themselves on CCDR performance status. The DAES includes a PM self-assessment section with ratings of green (on-track), yellow (significant actual or potential problem), or red (major problem). Cost, one of the required self-assessment categories, includes a component for assessing CCDR compliance. The PM's rating is based upon compliance with CCDR requirements by the responsible Government and contractor stakeholders. The DCARC also prepares an independent CCDR rating that is used during monthly OSD DAES review meetings.

C3.2.6. DEFENSE COST AND RESOURCE CENTER

DCARC shall administer the CSDR system for ACAT IC and ID programs and advise the CAIG Chair on CSDR policies and processing. In this capacity, the DCARC serves as the CAIG Chair's primary representative on all CSDR matters. Specific responsibilities are explained in the following subparagraphs.

C3.6.1. The DCARC shall be the primary office for final receipt, validation, acceptance, and distribution of CCDRs and SRDRs for ACAT IC and ID programs. The DCARC shall notify the reporting contractor, the responsible PM, and the cognizant Program Executive Officer (PEO) of any discrepancies identified during the validation process and shall ensure that they are resolved in a timely manner.

C3.6.2. The DCARC shall follow-up with the PM and CWIPT to ensure that the issued solicitation is consistent with the approved Program Plan and WBS Dictionary.

C3.6.3. The DCARC shall periodically assess (at least annually) the need for field reviews of contractor implementation of CSDR reporting for ACAT I programs.

C3.6.4. The DCARC Director shall provide the status of the CSDR processing for ACAT ID programs to the CAIG Chair with recommended action items, if appropriate, no later than 26 days before the OIPT review.

C3.6.5. The DCARC, in coordination with the CWIPT, the reporting contractor, and other interested stakeholders, such as the Defense Contract Audit Agency (DCAA) and

the Defense Contract Management Agency (DCMA), shall determine the need to perform a post-mortem review of the final CSDRs within 60 days after the final report is received. If needed, the DCARC shall lead the review effort.

C3.6.6. The DCARC shall establish electronic reporting requirements after consultation and coordination with defense industry representatives.

C3.6.7. The DCARC shall independently evaluate the PM's cost assessment on all quarterly DAES reports as it relates to compliance with CCDR requirements. The PM and DCARC assessments will be discussed at the monthly OSD DAES review meetings.

C3.7. REPORTING CONTRACTORS

Reporting contractors shall prepare and submit CSDRs in accordance with their contractual requirements. Specific responsibilities are described in the following subparagraphs.

C3.7.1. Reporting contractors shall provide estimates on DD Forms 1921, "Cost Data Summary Report," and 1921-1, "Functional Cost-Hour Report," and submit a recommended draft contract CSDR Plan as part of the response to the solicitation in accordance with DFARS paragraph 215.403.5.

C3.7.2. Reporting contractors shall submit the final contract WBS and WBS Dictionary within 60 days of contract award.

C3.7.3. Reporting contractors shall prepare CSDRs in accordance with contractual requirements, including the appropriate Data Item Descriptions (DIDs), which shall reference and comply with the mandatory guidance contained in this Manual. Contractors must provide CSDR data electronically for all new contracts and modifications containing additional work or new CSDR requirements awarded after October 1, 2003.

C3.7.4. Reporting contractors shall submit interim CCDRs within 60 days after the end of the reporting period as specified in the CSDR Plan.

C3.7.5. Reporting contractors shall forward the contract and lower-tier subcontract CSDR Plans to the DoD PM for review. For subcontractor reporting, the prime contractor shall forward the subcontract reference that specifies the reporting requirement to the DoD PM within 30 days of subcontract award.

C3.7.6. Reporting contractors shall forward to the DCARC an electronic copy of CSDRs that are contractually required within 180 days of contract award or 60 days after the Integrated Baseline Review (IBR) has been completed and approved, whichever was included in the approved CSDR Plan.

C3.7.7. Subcontractors and other lower-tier contractors shall send their CCDRs and SRDRs directly to the DCARC to facilitate processing. If the subcontractor agrees, a

copy of the report may be provided concurrently to the prime or other higher tier contractor.

C3.7.8. Reporting contractors shall promptly resolve any discrepancies identified by the DCARC during the validation process.

C3.8. DEFENSE CONTRACT AUDIT AGENCY

Section 11-400 of Defense Contract Audit Agency (DCAA) Manual 7640.1M, "DCAA Contract Audit Manual," Volume 2 (reference (f)), specifies the DCAA's role and audit responsibilities for CCDRs. The Manual requires DCAA auditors to evaluate the effectiveness of the contractor's policies, procedures, and practices to produce data compatible with CCDR objectives at least once a year. The DCARC may also request an audit of the first CCDR submission that includes actual contract costs and can request other audits of individual submissions as necessary. More frequent audits will be performed when significant deficiencies are disclosed. DCAA has developed a CCDR audit program to assist DCAA field offices in performing CCDR audits. DCAA will coordinate with DCARC when planning CCDR audits to identify any high-risk or sensitive contracts that should be included in the audit sample. The Manual also directs that DCAA audit reports be issued to the DCARC through the administrative contracting officer and that a copy be provided to the designated DoD Component official responsible for CCDRs.

C3.9. DEFENSE CONTRACT MANAGEMENT AGENCY

C3.9.1. The Defense Contract Management Agency (DCMA) is responsible for providing DCARC with Forward Pricing Rate (FPR) data for any business unit with $200 million or more in annual Government sales. These data were intended to replace the discontinued DD Form 1921-3, "Plant-Wide Data Report," beginning in 2000 as the source of contractor indirect costs. The data include FPR Proposals (FPRPs), FPR Recommendations (FPRRs), and FPR Agreements (FPRAs) that show indirect cost actual and estimated costs and related rates for a three to five-year period. FPRPs are contractor prepared; FPRRs are Government prepared; and FPRAs are joint Government and contractor documents. FPR data do not follow any standard formats. Either the responsible contractor or DCMA organization, as mutually agreed upon, is responsible for submitting FPR data.

C3.9.2. DCMA Information Memorandum 030222, "CCDR and Contractor Purchasing System Reviews (CPSRs)," April 25, 2003, specifies that appropriate DCMA personnel will verify CCDR flow-down requirements to subcontractors as contained in the CDRLs and related DIDs during CPSRs. The Administrative Contracting Officer will report any violations to the DCARC at ccdrpo@osd.mil.

C3.10. OFFICE OF SECRETARY OF DEFENSE (ACQUISITION, TECHNOLOGY, AND LOGISTICS)

Office of Secretary of Defense (Acquisition, Technology, and Logistics) (OSD/AT&L) has primary responsibility for the following CSDR related policy and information systems.

C3.10.1. DoD Handbook. Work Breakdown Structure (MIL-HDBK-881B). MIL-HDBK-881 presents guidelines for preparing, understanding, and presenting an acquisition work breakdown structure (WBS). It provides direction to DoD program managers and guidance to contractors. Such contractor guidancebecomes direction when it is incorporated into the contract using Contract Data Requirement Lists (CDRLs) and Data Item Descriptions (DIDs).

C3.10.2. Defense Acquisition Executive Summary. The Defense Acquisition Executive Summary (DAES) is an internal DoD acquisition oversight report prepared quarterly by DoD Program Managers on major and special-interest programs. The DAES includes a PM self-assessment section with ratings of green (on-track), yellow (significant actual or potential problem), or red (major problem). Cost, one of the required self-assessment categories, includes subcomponents for the EVMS, the CARD, and CCDRs. The PM rating is based upon compliance with CCDR requirements by the responsible Government and contractor stakeholders. The DCARC will independently rate the status of CCDRs for inclusion in the monthly OSD program review meeting.

C3.10.3. Earned Value Management System. The Earned Value Management System (EVMS) is used for acquisition cost, schedule, and technical management and oversight by contractor and Government personnel. Much of the data used for EVMS reporting for Cost Performance Reports and Cost/Schedule Status Reports are also used for CCDRs when the product-oriented WBS structure is properly established (in accordance with MIL-HDBK-881) and used. EVMS data are limited for purposes of estimating cost because a break out of recurring and nonrecurring cost and reporting is generally not required on firm fixed price contracts. Despite these limitations, the sharing of common data and the similarities in reporting formats may eventually warrant integrating the EVMS and CCDR systems.

C4. CHAPTER 4
PROCESSING AND ACTIVITIES

C4.1. CSDR FORMS PROCESSING

This section provides guidelines for processing the mandatory forms used for the CSDR process. Processing guidelines are identical for ACAT IC and ID programs.

C4.1.1. CSDR Plan

DD Form 2794, "Cost and Software Data Reporting Plan," referred to as the CSDR Plan, specifies the Work Breakdown Structure (WBS) elements, the specific report format, reporting frequency, and other supporting material such as the Responsibility Assignment Matrix (RAM), project availability matrix, and technical characteristics. There are two types of reporting plans: program CSDR Plans and contract (including subcontracts) CSDR Plans. In this manual, the term "CSDR Plan" refers to both types. If the information presented involves only one type of plan, the type is specified. The CSDR Plan shall be prepared in accordance with the instructions in Chapter 5.

C4.1.2. CCDR Forms

C4.1.2.1. DD Form 1921, "Cost Data Summary Report." This form is required on all ACAT IC and ID contracts and subcontracts that meet the dollar thresholds specified in section C2.3. It captures all contract WBS elements at the level specified in the CSDR Plan and includes both recurring and nonrecurring breakouts. This form shall be prepared in accordance with Data Item Description (DID) DI-FNCL-81565A.

C4.1.2.2. DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report." Beginning October 1, 2003, DD Form 1921-1, "Functional Cost-Hour Report," and DD Form 1921-2, "Progress Curve Report," were consolidated into one report, DD Form 1921-1 "Functional Cost-Hour and Progress Curve Report." Use of the new form is mandatory for all contracts and modifications containing additional work or new CSDR requirements signed after October 1, 2003; its use is optional for all contracts and modifications signed before October 1, 2003. The form shall apply to the total contract level as well as to the selected WBS elements (see the following two subparagraphs). The form shall be prepared in accordance with DID DI-FNCL-81566A.

C4.1.2.2.1. Part I. Part I of the new form, Functional Cost-Hour Report, is directed at selected WBS elements where more detailed cost data are needed. It contains a functional breakout (e.g., engineering and manufacturing) and a cost element breakout (e.g., direct labor and material) within functional categories. Part I applies specifically to WBS elements of high risk, high technical interest, or high value.

C4.1.2.2.2. Part II. Part II, Progress Curve Report, captures recurring costs on lot or unit data for selected WBS elements. Part II is required on high-risk or high-quantity programs from Research and Development (R&D) through Low-Rate Initial Production (LRIP) and the first Full-Rate Production (FRP) buy. Any element requiring Part II of the form shall also require Part I.

C4.1.3. SRDR Forms

C4.1.3.1. DD Form 2630-1, "Software Resources Data Report: Initial Government Report." This form contains context information that identifies the product, developer, and report. Project identification information includes the project name, the version or release of the product, the developing organization, the report as-of date, contract number or other identifier, and reporting event (initial Government report, initial contract or release report, or final contract or release report).

C4.1.3.2. DD Form 2630-2, "Software Resources Data Report: Initial Developer Report," and DD Form 2630-3, "Software Resources Data Report: Final Developer Report." These forms contain planned and actual data, respectively. Both forms contain project-level information that describes the process used to develop the software application. These data include the type of application, the associated development process, a capability rating of the developer, and a list of previous similar projects the developer has completed. The forms also request information on the primary and secondary languages used, and the extent to which existing Commercial Off-the-Shelf (COTS) or Government Off-the-Shelf (GOTS) applications were used. These data help analysts understand the context of the product and may be used as input to commercial software estimation models to refine effort and schedule estimates.

C4.2. ACTIVITY REQUIREMENTS

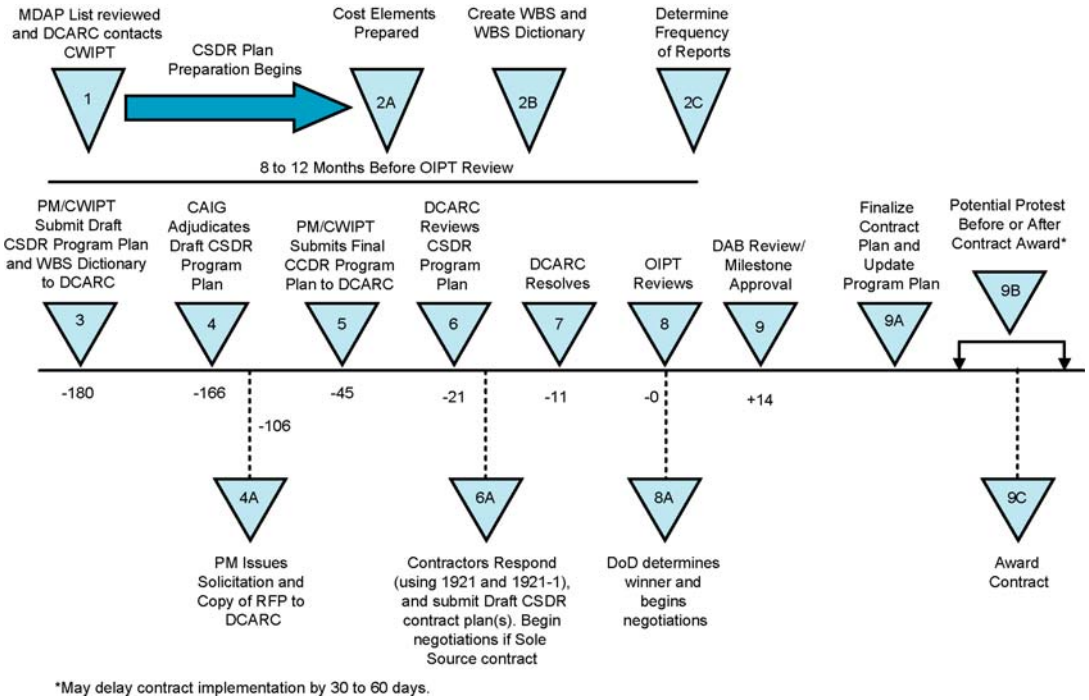
C4.2.1 Major Activities

C4.2.1.1. The CSDR process typically begins during the Concept Refinement and Technology Development phase after Milestone A (Concept Decision) and in preparation for Milestone B (Program Initiation). The process shall be repeated during Phase B, System Development and Demonstration, in preparation for Milestone C, and during Phase C, Production and Deployment, for each Milestone C Review (i.e., Low-Rate Initial Production and Production).

C4.2.1.2. CSDR activities shall be designed to begin reporting estimated costs in response to the solicitation to industry for Phase A contract awards that include advanced prototype development. Phase A contracts without prototype requirements may also have CCDR reporting if proposed and justified in the CSDR Plan approval process. Reporting of actual costs shall begin after award of the Phase A contract.

C4.2.1.2.1. Figure C4.F1 is a timeline of the major activities required during the CSDR planning process for ACAT ID programs. Each DoD Component has its own process for ACAT IC programs, but these programs still require CAIG Chair approval for all program and contract CSDR Plans. The DCARC shall continue to use the notional timeline to oversee the ACAT IC planning and reporting process. See Chapter 3 for specific organizational responsibilities.

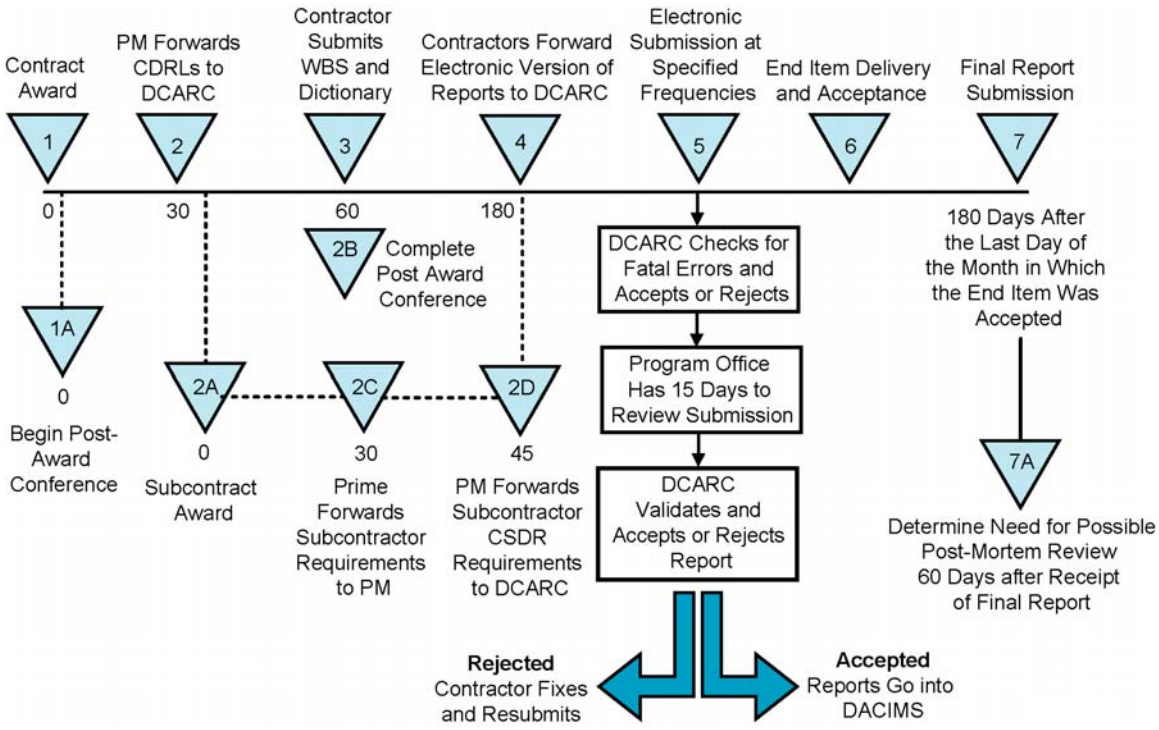
Figure C4.F1. Timeline for Developing Program and Contract CSDR Plans



C4.2.1.2.2. Figure C4.F2 is a timeline of the activities required during execution of the approved CSDR Plan for ACAT ID programs. See Chapter 3 for specific organizational responsibilities.

C4.2.1.2.3. The reporting period for development and production contracts shall end 180 days after the end of the month in which the final major end item was delivered and accepted. The 180 days consists of the “as of” date that is 120 days after the month of final delivery and an additional 60 days for submission time.

Figure C4.F2. Timeline for Executing Program CSDR Plans



C4.2.2. Activity Components

The requirements for each CSDR activity component described in the following subparagraphs apply to all contracts and subcontracts within a program.

C4.2.2.1. CSDR Plan Submission and Approval. Beginning October 1, 2003, all new CSDR Plans must be submitted electronically using the templates available from the DCARC Web site (http://dcarc.pae.osd.mil). The CAIG Chair shall review and approve all ACAT IC and ID CSDR Plans and any subsequent changes, including all block changes and contract options, before contract award or modification. For example, if a new end item is added to the contract, a revised CSDR Plan shall be submitted to the DCARC for CAIG Chair approval prior to contract award. The CSDR Plans shall also be updated to reflect current policy regarding CSDR requirements before any new contract or major modification is made. Typically, this occurs as part of the milestone decision process. However, if the CSDR requirements do not change at that time, the PM must submit a memorandum to the DCARC advising that the most recently approved CSDR Plan is still in effect.

C4.2.2.2. Subcontractor Reporting. CSDR reporting requirements flow down from the prime contractor to all subcontractors that meet reporting thresholds. Prime contracts and subcontracts have identical reporting requirements regarding report type, frequency, and method of transmission. The prime contractor will work with the CWIPT and all subcontractors to prepare separate subcontract plans for submission to the DCARC for CAIG approval. The prime contract and subcontract WBS elements might be different, but they will be complementary.

C4.2.2.3. WBS and Dictionary. The WBS is a product-oriented structure composed of hardware, software, services, data, and facilities. This structure shall be closely developed with systems engineering and other functional area experts, as appropriate, during the acquisition of a defense materiel item using the product-oriented structure in MIL-HDBK-881 (reference (e)) as guidance. Each major program requiring CSDR reporting falls into one of seven WBS templates for weapon system commodity areas specified in reference (e): Aircraft Systems, Electronic/Automated Software Systems, Missile Systems, Ordnance Systems, Ship Systems, Space Systems, and Surface Vehicle Systems.[4] The WBS shall include the WBS Dictionary, which describes each program/contract WBS element throughout the life of the contract. The reporting contractor shall prepare and submit the WBS Dictionary within 60 days of contract award. The reporting contractor shall maintain and update the WBS Dictionary throughout the life of the contract. The WBS dictionary shall not be submitted more frequently than report submissions.

C4.2.2.4. Contract Types. All contract types, including Firm Fixed Price (FFP) contracts, require CSDR reporting. FFP contracts that were competitively awarded and are still experiencing competitive conditions may be submitted for waiver approval. Contracts involving ACAT I programs must be submitted to the DCARC for CAIG Chair approval.

C4.2.2.5. CCDR-Specific Activities

C4.2.2.5.1. Frequency and Due Dates. CCDR Forms (DD Forms 1921 and 1921-1) that reflect estimated costs shall be marked "initial" and submitted electronically to the DCARC within 180 days of contract award for development contracts and first FRP contracts or 60 days after the Integrated Baseline Review (IBR) has been completed or approved, whichever is negotiated as part of the CSDR plan. These initial reports must contain Estimates At Completion (EACs) for each reporting element. Subsequent reports shall be submitted as specified in the CAIG-approved contract CSDR Plan. The purpose of the initial submission is to ensure reporting consistency with DD Form 1423-1, "Contract Data Requirements List" (CDRL) and the CSDR Plan. Final reports shall be prepared, marked final, and submitted 180 days after the end of the month in which the final major end item was delivered and accepted (or 60 days after the "as of" date). All final reports shall include EACs for any reported element where actual costs incurred are less than 100 percent of their respective EACs.

C4.2.2.5.2. Electronic Submission and File Type. All CCDRs must be submitted electronically. The following subparagraphs explain specific requirements.

C4.2.2.5.2.1. Reports for new or modified (containing additional work or new CSDR requirements) ACAT IC and ID program contracts or contract modifications (that add work or new CCDR requirements) awarded after October 1, 2003, must be

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[4] In recent years, the Department of Defense has introduced another category of weapon systems referred to as the system of systems. This refers to one overall system that includes several individual systems included under one umbrella used to satisfy specific mission needs. Planned revisions to MIL-HDBK-881 (reference (e)) will address the WBS structure requirements for the system of systems.

submitted as secure e-mail attachments, using a certificate issued by the DCARC for encryption and digital signature or by report upload to the secure Web site. See paragraph C7.4.2 and its subparagraphs for information about how to obtain a certificate. The reports must be a standard Microsoft Excel file, an Excel-readable template, or the Excel format produced by version 2.0 of the CCDR Pre-Processor Version 1.x of the Pre-Processor does not support the new report formats. (See subparagraph C4.2.2.5.2.3 for further information.)

C4.2.2.5.2.2. Contractors for unmodified contracts awarded before October 1, 2003, who have submitted CCDR reports via the Electronic Data Interchange (EDI) format (Transaction Set 196, version 4010, of the EDI convention), may continue to use the EDI format or use one of the Excel formats listed in the previous subparagraph. The DCARC will work with individual contractors to phase-out EDI reporting. EDI format reports must be submitted electronically as secure e-mail attachments, using a certificate issued by the DCARC for encryption and digital signature. See paragraph C7.4.2 and its subparagraphs for information about how to obtain a certificate.

C4.2.2.5.2.3. The DCARC is currently upgrading the Pre-Processor tool and developing a schema for the Extensible Markup Language (XML) data exchange. Once complete, this new software application will allow secure, direct data input, and validation. Upon completion, the DCARC staff will work with individual contractors to establish a migration plan to the new XML system.

C4.2.2.5.2.4. The Excel template, XML guidance, the Pre-Processor tool, and links to request a DCARC certificate are available from the DCARC Web site (http://dcarc.pae.osd.mil).

C4.2.2.6. SRDR-Specific Activities

C4.2.2.6.1. Frequency. Within 60 days of contract award, the software developer must submit DD Form 2630-2, "Software Resources Data Report: Initial Developer Report," for the all the planned software deliverables, customized as agreed to by the CWIPT. The developer must also submit an initial SRDR for each software release or element within 60 days of its initiation. Within 60 days after development, and within 60 days after each software release or element is delivered to the Government, the software developer must submit DD Form 2630-3, "DD Form 2630-3, "Software Resources Data Report: Final Developer Report," customized as agreed to by the CWIPT, as final "as built" SRDR. Developers must submit a final SRDR for the entire software product upon contract completion.

C4.2.2.6.2. Electronic Submission and File Type. Developers submit Software Resources Data Reports (SRDRs) to the DCARC as secure e-mail attachments using a certificate issued by the DCARC for encryption and digital signature. See paragraph C7.4.2 and its subparagraphs for information about how to obtain a certificate.

C5. CHAPTER 5
PLANNING AND CONTRACTING

The CSDR Plan (DD Form 2794, "Cost and Software Data Reporting Plan") is the key document in establishing reporting requirements throughout each phase of an acquisition program. The CSDR Plan is needed for both the Request For Proposals (RFP) process and the contract award process. Its primary purposes are to serve as the reference document for placing data requirements on contract, as the source document used to compare with actual reporting data from contractors to ensure that data are reported as planned, and—along with the Work Breakdown Structure (WBS) Data Dictionary—as the source document to compare data plans and definitions with different WBS levels and weapon systems. This chapter provides requirements for CSDR Plan processing, instructions for completing DD Form 2794, and procedures for placing CCDR and SRDR requirements on contract.

C5.1. CSDR PLAN PROCESSING

C5.1.1. For ACAT IC and ID programs, all CSDR Plans (DD Form 2794, "Cost and Software Data Reporting Plan") for either programs or contracts (including subcontracts) must be submitted to the Defense Cost and Resource Center (DCARC) for Cost Analysis Improvement Group (CAIG) Chair approval.

C5.1.2. The CSDR Plans shall reflect the proposed collection of cost data, by product-oriented WBS, for a program or contract. They shall also identify the specific reports required and specify reporting frequency.

C5.1.3. The CAIG Chair must approve program CSDR Plans before the Program Manager issues a solicitation to industry. Contract CSDR Plans must be approved before awarding the contract. If a program or contract CSDR Plan is changed at any time, the Program Manager (PM) must resubmit the individual plan for CAIG Chair approval.

C5.1.4. A copy of the final CSDR Plan approved for the program shall be included in the Cost Analysis Requirements Description (CARD) in accordance with reference (c). If the CSDR Plan has not yet been approved, include a copy of the draft CSDR Plan as submitted to the DCARC for ACAT IC and ID programs.

C5.2. PREPARATION OF THE CSDR PLAN

C5.2.1. The format for DD Form 2794, shown in Figure C5.F3, reflects the proposed collection of CCDR and SRDR data by program or contract, including reporting elements (e.g., WBS elements), report type, and frequency of reporting. The CSDR Plan may be for the entire program (a program CSDR Plan) or for an individual contract within a program (a contract CSDR Plan).

Figure C5.F3. DD Form 2794, "Cost and Software Data Reporting Plan" (Page 1)

COST AND SOFTWARE DATA REPORTING PLAN

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 15 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (XXXX-XXXX), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

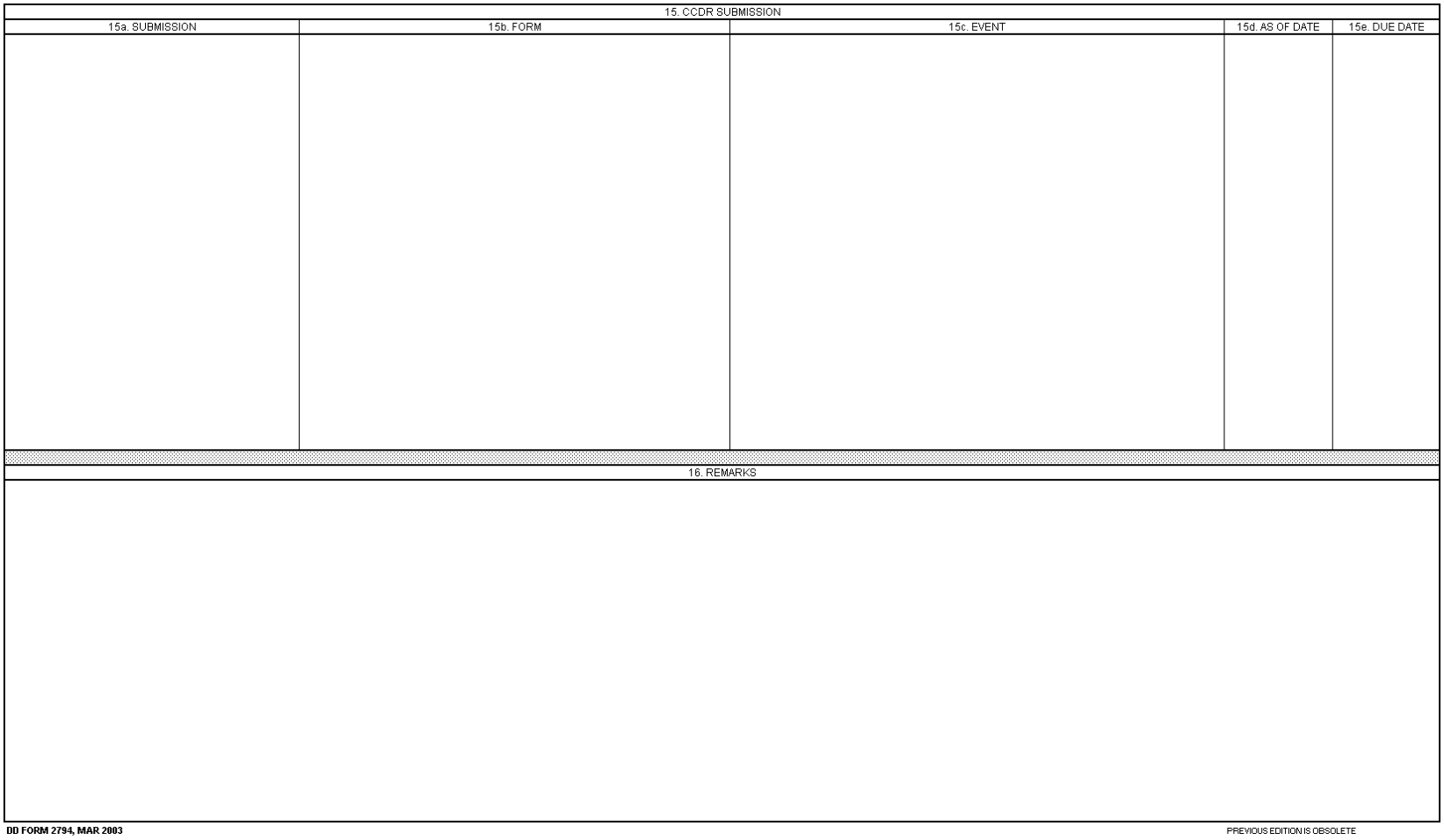
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.

1a. PROGRAM				2. WEAPON SYSTEM TYPE	3. SUBMISSION TYPE ☐ INITIAL SUBMISSION ☐ CHANGE	4. DATE AS OF *(MM/DD/YY)*	5. REPORT DATE *(MM/DD/YY)*
1b. MILESTONE	A ☐	B ☐	C: LRIP ☐	C: PROD ☐			
6a. POINT OF CONTACT (POC) NAME AND ADDRESS *(Include ZIP Code)*				6b. POC TELEPHONE NO. *(Include Area Code)* 6c. POC FAX NO. *(Include Area Code)* 6d. POC E-MAIL ADDRESS	7. WBS ☐ PROGRAM ☐ CONTRACT	8. PREPARING ORGANIZATION 9. REVIEW AND REFERENCE NUMBER	

10. WBS ELEMENT CODE		11. WBS REPORTING ELEMENTS	12. CONTRACTOR (DUNS Code)	13. CONTRACT NUMBER	14. REPORT FREQUENCY			
10a. PROGRAM	10b. CONTRACT				14a. DD 1921 REQUIRED	14b. DD 1921-1 (Part I) REQUIRED	14c. DD 1921-1 (Part II) REQUIRED	14d. DD 2630 REQUIRED

DD FORM 2794, MAR 2003 PREVIOUS EDITION IS OBSOLETE

Figure C5.F3. DD Form 2794, “Cost and Software Data Reporting Plan” (Page 2)



15. CCDR SUBMISSION				
15a. SUBMISSION	15b. FORM	15c. EVENT	15d. AS OF DATE	15e. DUE DATE

16. REMARKS

DD FORM 2794, MAR 2003 PREVIOUS EDITION IS OBSOLETE

C5.2.2. For ACAT I programs, the PM prepares the Plan in coordination with the Cost Working-Level Integrated Product Team (CWIPT), the DCARC reviews it, and the CAIG Chair approves it. The participation of all appropriate CCDR and SRDR stakeholders in the early development of the CSDR Plan facilitates communication about program and contract cost estimating throughout the acquisition life cycle. ACAT I Program Plans must be submitted with the CARD either 180 days before the Overarching Integrated Product Team (OIPT) meets or at least 60 days before the solicitation to industry, whichever is earlier. This requirement ensures the results of the CAIG review can be included in the solicitation to industry.

C5.2.3. DoD PMs should use Microsoft Word, Microsoft Excel, or a compatible format to complete an electronic version of DD Form 2794. PMs are encouraged to develop CSDR Plans using the automated Excel form available from the DCARC Web site (http://dcarc.pae.osd.mil/ccdr_formstools.htm).

C5.2.4. The reporting elements consist largely of the product-oriented WBS structure, which provides the framework for programs involving a given commodity. When combined with the standard CCDR cost categories (e.g., functional categories and cost elements), the product-oriented WBS provides the needed consistency and comparability essential to developing normalized databases for purposes of estimating cost. Generally, the CSDR Plan shall be limited to the minimum number of product-oriented WBS elements needed for estimating. Reporting shall generally be at level 3 of the contract WBS but may be selectively extended with CAIG approval for WBS elements in high-risk, high-value, or high-technical-interest areas that warrant separate reporting. The CWIPT shall identify these elements.

C5.3. INSTRUCTIONS FOR COMPLETING DD FORM 2794

The following paragraphs describe how to complete the individual data elements of the CSDR Plan.

C5.3.1. Item 1a. Program. This data element is a free-form description to identify the name of the program. It may contain the formal or common name of the program and shall include the program's mission, design, series, or other military designation of the prime item to be purchased on the contract. If the contract is for services or level of effort (research, flight test, etc.), indicate the type of service.

C5.3.2. Item 1b. Milestone. Check the appropriate block for the phase for which you are entering data: Milestones A, B, C: LRIP (for Low-Rate Initial Production), and C: PROD (for Full-Rate Production).

C5.3.3. Item 2. Weapon System Type. Use this data element to identify the weapon system type. A Major Defense Acquisition Program (MDAP) must be categorized into one of the weapon system types defined in MIL-HDBK-881 (reference (e)).

C5.3.4. Item 3. Submission Type. Check the appropriate box to indicate whether the CSDR Plan is an initial submission or a change to a previously approved CSDR Plan.

C5.3.5. Item 4. Date As Of. The "as of" date is the date when the CSDR Plan was last revised or updated. The date format is mm/dd/yy (e.g., 06/15/03 for June 15, 2003). Leave this item blank if this is an initial submission.

C5.3.6. Item 5. Report Date. Enter the date when the reporting organization submitted the Plan. The date format is mm/dd/yy (e.g., 12/31/02 for December 31, 2002).

C5.3.7. Items 6a through 6d. Point of Contact (POC) Information. Enter the relevant information about the POC as follows: item 6a, name, street address, city, state, and ZIP code; item 6b, telephone number, including area code; item 6c, fax number, including area code; and item 6d, e-mail address.

C5.3.8. Item 7. WBS. Check the appropriate block for WBS type (Program WBS or Contract WBS) included in the CSDR Plan.

C5.3.9. Item 8. Preparing Organization. Enter the name of the organization preparing the CSDR Plan. A representative from the DoD program office normally prepares CSDR Plans with the advice and assistance of the CWIPT.

C5.3.10. Item 9. Review and Reference Number. After review and approval, the DCARC assigns a reference number to the CSDR Plan. Use that reference number for CSDR Plan change submissions; leave this item blank for initial submissions.

C5.3.11. Item 10. WBS Element Code. There are three options for WBS element codes for both program and contract CSDR Plans: numeric decimal (e.g., 1.0 for parent, 1.1 for child of 1.0, and 1.1.1 for child of 1.1); thousand numeric (e.g., 1000 for parent, 1100 for child of 1000, and 1110 for child of 1100); and alpha (e.g., A for parent, AA for child of A, and AAA for child of AA). DCARC is developing automated tools to support these options.

C5.3.11.1. Item 10a. Program. Enter WBS element codes that conform to one of the options in paragraph C5.2.11. For program CSDR Plans, no corresponding contract WBS element codes are required under item 10b.

C5.3.11.2. Item 10b. Contract. Enter the contractor's internal WBS element codes that map to or are consistent with the program WBS. For contract CSDR Plans, codes must be entered under item 10a for related program WBS elements.

C5.3.12. Item 11. WBS Reporting Elements. Enter the title of the specific WBS reporting element. See reference (e) for standard WBS guidance. In addition, identify subsystems by their official designations (e.g., T700 Engine, AN/APG-73 Radar, and Fire Control Radar) to allow for identification of subsystems that are common to other major systems.

C5.3.13. Item 12. Contractor (DUNS Code). Enter the standard contractor abbreviation or Dun and Bradstreet's Universal Numbering System (DUNS) code after the contractor is selected. For more information on the DUNS code, go to the Dun and Bradstreet Web site (http://www.dnb.com/US/duns_update/index.html). Leave this item blank if the code is not yet known.

C5.3.14. Item 13. Contract Number. Enter the number of the contractor's contract with the Government to identify the current or existing contract under which the item is to be procured. Leave this item blank if the number is not yet known.

C5.3.15. Item 14. Report Frequency. For each WBS element listed, indicate the reporting frequency requirements.

C5.3.15.1. Item 14a. DD 1921 Required. Enter an X in this column if the WBS element requires DD Form 1921, "Cost Data Summary Report."

C5.3.15.2. Item 14b. DD 1921-1 (Part I) Required. Enter an X in this column if the WBS element requires DD Form 1921, "Functional Cost-Hour and Progress Curve Report," Part I, Functional Cost-Hour Report.

C5.3.15.3. Item 14c. DD 1921-1 (Part II) Required. Enter an X in this column if the WBS element requires DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report," Part II, Progress Curve Report.

C5.3.15.4. Item 14d. DD 2630 Required. Enter an X in this column if the WBS element requires an SRDR from the DD Form 2630 series.

C5.3.16. Item 15. CCDR Submission. Enter information related to the CCDR submission as described in the following subparagraphs.

C5.3.16.1. Item 15d. Submission. Enter the sequential number of each report submission (beginning with 1).

C5.3.16.2. Item 15b. Form. Enter the CCDR form numbers related to the submission.

C5.3.16.3. Item 15c. Event. Enter the event or time period driving the CCDR submission (e.g., first flight test or annual reporting).

C5.3.16.4. Item 15d. As of Date. Enter the planned "as of" date for the CCDR submission. This represents the cutoff date from the contractor's accounting system that describes the data in the report.

C5.3.16.5. Item 15e. Due Date. Enter the CCDR submission due date for the planned submission.

C5.3.17. Item 16. Remarks. Enter any pertinent remarks about the CSDR Plan that help explain or clarify any of the entries for items 1 through 15. Use Remarks continuation sheets as necessary. The information supplied is not intended in any way to preempt the prime contractor's selection process for subcontractors. Instead, its purpose is to establish an early tracking mechanism to ensure all appropriate reporting requirements are implemented. The information might have to be revised as RFPs are issued and contracts are awarded.

C5.3.18. Addendum for Program CSDR Plans. Provide the following information on a separate page(s) attached to the program CSDR Plan.

C5.3.18.1. Responsibility Assignment Matrix (RAM). For program CSDR Plans, provide the name and address of any prime contractors, subcontractors, and lower-tier subcontractors that might meet the CCDR reporting thresholds along with the specific WBS elements for which they are responsible. If a specific subcontractor is not yet known, enter "TBD" (for "to be determined") and the WBS elements.

C5.3.18.2. Project Applicability Matrix. For program CSDR Plans, provide the project name, description, and related WBS elements for those programs that include spiral/evolutionary efforts.

C5.3.18.3. Technical Characteristics. For program CSDR Plans, identify the specific unclassified characteristics and related metrics (e.g., weight, range, and speed) for each prime, associate, or subcontractor expected to meet the CCDR reporting thresholds. Classified characteristics are excluded from this requirement. If a specific contractor is not yet known, enter "TBD" (for "to be determined"), the WBS elements, and expected technical characteristics. The PM, in coordination with the CWIPT, is responsible for identifying the proposed characteristics. Airframe weight is a mandatory requirement for aircraft contracts.

C5.3.19. Addendum for Contract CSDR Plans. Provide definitions for recurring and nonrecurring costs on a separate page(s) attached to the contract CSDR Plan. The standard definitions for recurring and nonrecurring costs can be found in the Definitions section at the front of this Manual and in the two CCDR DIDs in Appendix 1. Any deviations from these definitions should be identified and documented by the CWIPT as an addendum to the contract CSDR Plan after agreement with the reporting contractor. This agreement must be reached at the same time the CWBS and WBS Dictionary are being prepared and approved.

C5.4. PLACING REQUIREMENTS ON CONTRACT

C5.4.1. The CSDR planning process culminates in contract award. The approved program CSDR Plan is used as a starting point to prepare the proposed contract CSDR Plan included in the RFP. The contractor's response to the RFP accepts or recommends changes to the contract CSDR Plan. The final proposed CSDR Plan is negotiated (with CWIPT involvement) and submitted to the DCARC for CAIG Chair approval. Figures

C5.F4 and C5.F5 show the recommended language that contains the essential instructions for implementing CCDRs and SRDRs, respectively.

C5.4.2. The final approved contract CSDR Plan is included in the contract by incorporating a DD Form 1423-1, “Contract Data Requirements List” (CDRL) that identifies specific CCDR or SRDR requirements for development and production contracts. DD Form 1423-1 is available for download from the Washington Headquarters Services Web site (http://web1.whs.osd.mil/ICDHOME/FORMS.HTM).

C5.4.3. In the case of CCDR, a separate CDRL is prepared for each of the two CCDRs and the Contract Work Breakdown Structure (CWBS). Figures C5.F6 and C5.F7 are examples of partially completed first pages of the CDRLs for DD Forms 1921 and 1921-1, respectively. Contractors must submit copies of the WBS and WBS Dictionary 60 days after contract award. Figure C5.F8 is an example of a CDRL for the CWBS.

C5.4.4. In the case of SRDR, one CDRL is prepared for the SRDRs. Figures C5.F9 and C5.F10 are examples of partially completed first pages of the CDRLs for DD Forms 2630-2 and 2630-3, respectively. Contractors must submit copies of the SRDR Data Dictionary 60 days after contract award.

C5.4.5. To verify that CSDR requirements were placed on contract, the DoD Program Manager must submit copies of all signed CDRLs for all contracts and subcontracts to the DCARC within 30 days of contract award. Required CDRLs include both prime contracts and any lower-tier subcontracts that have CCDR or SRDR requirements. The CDRLs shall be submitted electronically and must include the contract requirements for the WBS, WBS Dictionary, and the appropriate DD forms as contained in the CAIG-approved CSDR plan.

Figure C5.F4. Proposed RFP Language for Contractor Cost Data Reporting

Contractor Cost Data Reporting (CCDR)
Proposed RFP Language

The contractor shall systematically collect and report actual contract costs to provide DoD cost analysts with needed data to estimate future costs. The contractor as part of the response to the RFP will:

a. Propose a draft contract cost and software data reporting (CSDR) plan, DD Form 2794, that includes the contract WBS using the approved program plan and the draft contract plan provided by the DoD program office as the baseline. The contract CSDR plan will include level 3 of the contract WBS and any lower level WBS elements designated by DoD as being high risk, high value, or high technical interest. The contractor may further extend the WBS for its own reporting purposes.

b. Negotiate a final draft CSDR plan that will be submitted by the DoD program office to the DCARC for review and the Cost Analysis Improvement Group (CAIG) Chair's approval. The final approved contract CSDR plan will be incorporated into the contract.

c. IAW DFAR 215.403.5, provide contract cost estimates on the DD Forms 1921 and 1921-1 using the contract WBS proposed in subparagraph a above.

After contract award the contractor shall:

d. Provide the final contract WBS and dictionary IAW DI-MGMT-81334 within 60 days after contract award. Maintain and update the WBS and dictionary during contract execution. Submittals will be no more frequent that CCDR reports.

e. Prepare and provide CCDRs IAW DI-FNCL-81565A and DI-FNCL- 81566A and with the approved contract CSDR plan.

f. Flow down CCDR requirements to any lower tier contractor that will have a contract valued at over $50 million (FY 2002 dollars) or any contracts valued at between $7 million and $50 million (2002 dollars) that are designated by the DoD program office as being high risk, high value, or high technical interest.

CCDR Evaluation

The contractor's proposed CDSR Plan will be evaluated based on data needs as shown in the approved program CSDR plan and the DoD proposed contract CSDR plan. The contractor is encouraged to propose changes to either plan to improve reporting accuracy, consistency, and relevancy. The DD Forms 1921 and 1921-1 cost estimates will be evaluated based upon their consistency with the contractor's proposed contract CSDR plan.

Figure C5.F5. Proposed RFP Language for Software Resources Data Reporting

Software Resources Data Reporting (SRDR)
Proposed RFP Language

RFP Language for Section L, Instructions

The government desires software resources data on the elements identified within the attached CSDR Plan. The data desired for each marked element are contained on the attached DD Form 2630 forms (SRDR) and associated definitions and instructions. The government desires to collect a subset of the same data that the contractor normally collects to oversee and manage software development efforts. Therefore, the government expects the contractor to customize or tailor the DD Form 2630 forms to be consistent with data it normally collects. The contractor shall propose the software resources data within a CSDR Plan The contractor shall provide a SRDR Data Dictionary with the customized DD Form 2630 forms.

The contractor shall submit completed DD Forms 2630-2 and 2630-3 in accordance with the approved CSDR Plan. For the DD Form 2630-2 this will be within 60 days after contract award for the entire software product, and within 60 days after initiation of each software release or build. The contractor shall submit a completed DD Form 2630-3 within 60 days of delivery of each delivered software release. The contractor shall submit a completed DD Form 2630-3 for the entire software product within 60 days of delivery of the final software element. Report format and other delivery requirements are specified in the attached CDRL.

RFP Language for Section M, Evaluation

The contractor's customized SRDR and Data Dictionary will be evaluated on the extent to which (1) the report captures the government's stated need and (2) the data provided is integrated with the contractor's normal oversight and management procedures.

Figure C5.F6. Example of DD Form 1423-1, "Contract Data Requirements List," (Page 1) for DD Form 1921, "Cost Data Summary Report"

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP _____ TM _____ OTHER _____
D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
	Cost Data Summary Report (DD Form 1921)	Contractor Cost Data Reporting (CCDR)	18. ESTIMATED TOTAL PRICE

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-FNCL-81565A		

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	

16. REMARKS

Prepare Blocks 10, 12, and 13 in accordance with the CAIG Chair-approved Contract Cost and Software Data Reporting (CSDR) Plan provisions and the Contractor Cost Data and Software Resources Reporting Manual (DoD 5000.4-M-1). The CSDR Plan is included as contract attachment 1. The Contractor Cost Data and Software Resources Reporting Manual is available from the DCARC Web site at http://dcarc.pae.osd.mil. The responsible DoD office for receiving and storing all CCDR-related formats is:

Defense Cost and Resource Center (DCARC)
1111 Jefferson Davis Highway
PO Box 005
Arlington, VA 22202
(703) 602-3169

Prepare CCDR data in electronic format in accordance with the detailed instructions contained in Data Item Description DI-FNCL-81565A. Prime contractors are responsible for flowing down CCDR requirements contained in their prime contracts to all subcontractors who meet the reporting thresholds. This includes requiring subcontractors to electronically report directly to the DCARC.

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
DCARC			
See Item 16			
15. TOTAL →	0	0	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

DD FORM 1423-1, FEB 2001 PREVIOUS EDITION MAY BE USED. Page ____ of ____ Pages

Reset

Figure C5.F7. Example of DD Form 1423-1, "Contract Data Requirements List," (Page 1) for DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report"

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP _____ TM _____ OTHER _____
D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
	Functional Cost-Hour and Progress Curve Report (DD Form 1921-1)	Contractor Cost Data Reporting (CCDR)	18. ESTIMATED TOTAL PRICE

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-FNCL-81566A		

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION			
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
				DCARC			
				See Item 16			
				15. TOTAL →	0	0	0

16. REMARKS

Prepare Blocks 10, 12, and 13 in accordance with the CAIG Chair-approved Contract Cost and Software Data Reporting (CSDR) Plan provisions, the WBS Data Dictionary, and the Contractor Cost Data and Software Resources Reporting Manual (DoD 5000.4-M-1). The contract CSDR Plan is included as contract attachment 1. The Contractor Cost Data and Software Resources Reporting Manual is available from the DCARC Web site at http://dcarc.pae.osd.mil. The responsible DoD office for receiving and storing all CCDR-related formats is:

Defense Cost and Resource center (DCARC)
1111 Jefferson Davis Highway
PO Box 005
Arlington, VA 22202
(703) 602-3169

Prepare CCDR data in electronic format in accordance with the detailed instructions contained in Data Item Description DI-FNCL-81566A. Prime contractors are responsible for flowing down CCDR requirements contained in their prime contracts to all subcontractors who meet the reporting thresholds. This includes requiring subcontractors to electronically report directly to the DCARC.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

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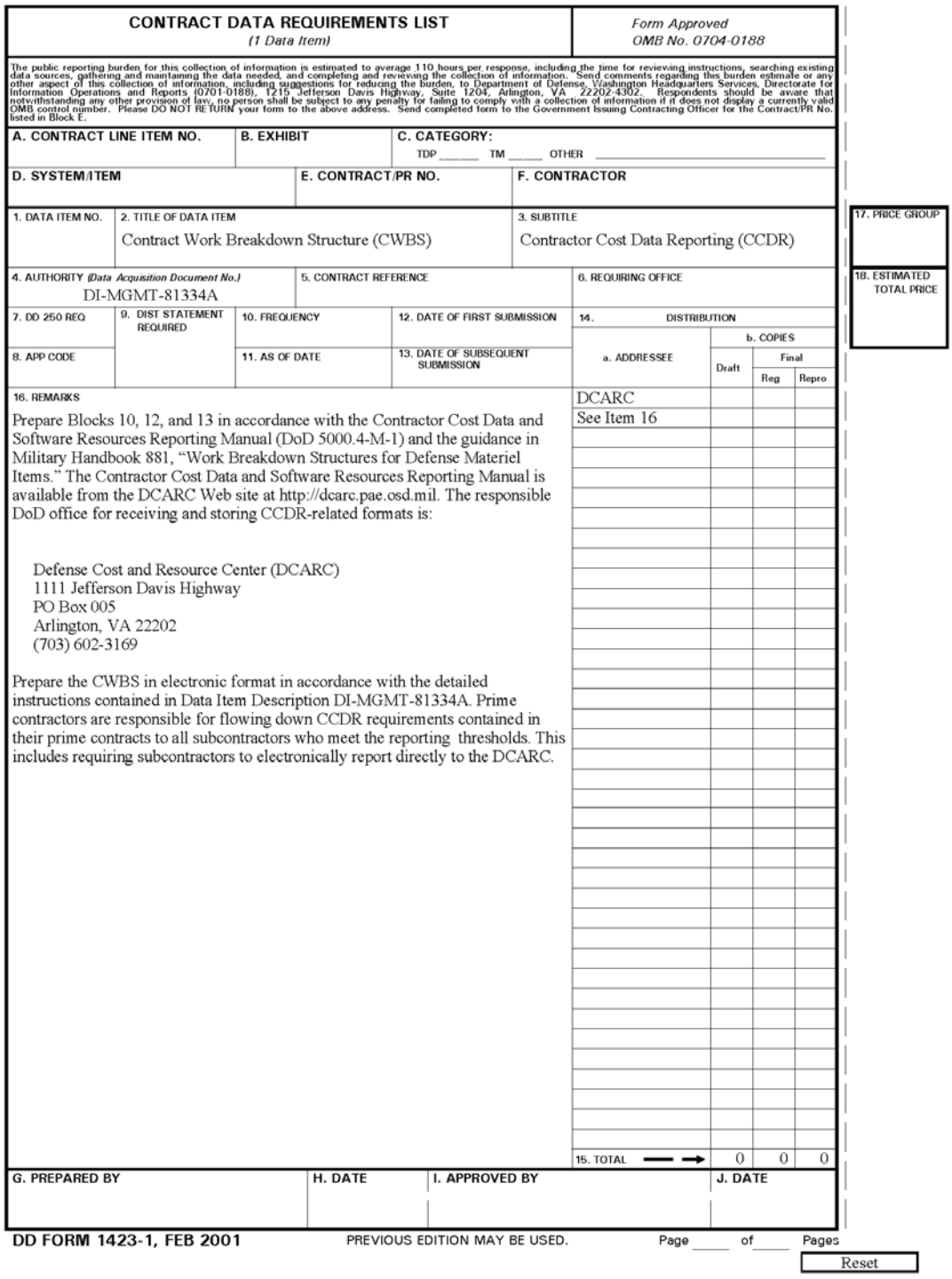
Figure C5.F8. Example of DD Form 1423-1, "Contract Data Requirements List," (Page 1) for the Contract Work Breakdown Structure



CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP _____ TM _____ OTHER _____
D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
	Contract Work Breakdown Structure (CWBS)	Contractor Cost Data Reporting (CCDR)

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-MGMT-81334A		

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION

16. REMARKS

Prepare Blocks 10, 12, and 13 in accordance with the Contractor Cost Data and Software Resources Reporting Manual (DoD 5000.4-M-1) and the guidance in Military Handbook 881, "Work Breakdown Structures for Defense Materiel Items." The Contractor Cost Data and Software Resources Reporting Manual is available from the DCARC Web site at http://dcarc.pae.osd.mil. The responsible DoD office for receiving and storing CCDR-related formats is:

Defense Cost and Resource Center (DCARC)
1111 Jefferson Davis Highway
PO Box 005
Arlington, VA 22202
(703) 602-3169

Prepare the CWBS in electronic format in accordance with the detailed instructions contained in Data Item Description DI-MGMT-81334A. Prime contractors are responsible for flowing down CCDR requirements contained in their prime contracts to all subcontractors who meet the reporting thresholds. This includes requiring subcontractors to electronically report directly to the DCARC.

14. DISTRIBUTION			
a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
DCARC			
See Item 16			
15. TOTAL →	0	0	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

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Figure C5.F9. Example of DD Form 1423-1, "Contract Data Requirements List," (Page 1) for DD Form 2630-2, "Software Resources Data Report: Initial Developer Report"

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
	Software Resources Data Report: Initial Developer Report (DD Form 2630-2)	Software Resources Data Reporting (SRDR)	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
Not applicable	Provided by the contractor		

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION
LT	E	Not applicable	See Block 16	
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**	
Not applicable		See Block 16	See Block 16	

16. REMARKS	a. ADDRESSEE	b. COPIES		
		Draft	Final	
			Reg	Repro
Submissions shall be prepared in accordance with the contract, proposed tailoring of the DD Form 2630 series of forms (SRDR), and the Contractor Cost Data and Software Resources Reporting Manual (DoD 5000.4-M-1). Block 11 - 60 days after contract award - 60 days after start of each software release Block 12 - 60 days after contract award Block 13 - 60 days after start of each software release Block 14 - SRDR shall be prepared in Microsoft Excel workbook/worksheet-readable format. Distribution: Submit electronically in accordance with the detailed instructions contained in the Data Item Description. The responsible DoD office for receiving and storing all SRDR-related formats is: Defense Cost and Resource Center (DCARC) 111 Jefferson Davis Highway PO Box 005 Arlington, VA 22202 (703) 602-3169	DCARC			
	See Block 16			
	15. TOTAL →	0	0	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

DD FORM 1423-1, FEB 2001 PREVIOUS EDITION MAY BE USED. Page ____ of ____ Pages

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Figure C5.F10. Example of DD Form 1423-1, "Contract Data Requirements List," (Page 1) for DD Form 2630-3, "Software Resources Data Report: Final Developer Report"

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP _____ TM _____ OTHER _____
D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
	Software Resources Data Report: Final Developer Report (DD Form 2630-3)	Software Resources Data Reporting (SRDR)	18. ESTIMATED TOTAL PRICE

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
Not applicable	Provided by the contractor	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION			
LT	E	Not applicable	See Block 16	a. ADDRESSEE	b. COPIES		
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION		Draft	Final	
Not applicable		See Block 16	See Block 16			Reg	Repro
16. REMARKS				DCARC			
				See Block 16			

Submissions shall be prepared in accordance with the contract, proposed tailoring of the DD Form 2630 series of forms (SRDR), and the Contractor Cost Data and Software Resources Reporting Manual (DoD 5000.4-M-1).

Block 11 - 60 days after delivery of each software release
- 60 days after contract completion for the entire software product
Block 12 - 60 days after delivery of first software release
Block 13 - 60 days after delivery of each subsequent software release
- 60 days after contract completion for the entire software product
Block 14 - SRDR shall be prepared in Microsoft Excel-readable format.

Distribution: Submit electronically in accordance with the detailed instructions contained in the Data Item Description.

The responsible DoD office for receiving and storing all SRDR-related formats is:

Defense Cost and Resource Center (DCARC)
111 Jefferson Davis Highway
PO Box 005
Arlington, VA 22202

(703) 602-3169

15. TOTAL →	0	0	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

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C6. CHAPTER 6
REPORTING GUIDANCE

C6.1. INTRODUCTION

This chapter establishes the general framework for preparing and submitting CSDR reports. It serves as a general reporting reference for Government Program Managers, Government reporting entities, reporting contractors, and other CSDR stakeholders. Detailed reporting instructions for Contractor Cost Data Reports (CCDRs) and Software Resources Data Reports (SRDRs) are located in Appendixes A and B, respectively.

C6.2. CONTRACTOR COST DATA REPORTING

This section contains both general guidance and specific instructions to help contractors fulfill the reporting requirements for DD Form 1921, "Cost Data Summary Report," and DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report." The CCDR Pre-Processor, an automated tool for preparing these reports electronically, is available from the DCARC Web site (http://dcarc.pae.osd.mil/software_tools.htm).

C6.2.1. Reporting Elements. Contractor cost data shall be collected on all elements specified in the CSDR Plan approved by the CAIG Chair. Reporting elements are any contract items on which data are to be collected. They primarily consist of Work Breakdown Structure (WBS) elements but also include such other subdivisions as General and Administrative (G&A) expenses and profit/loss or fee. Reporting elements may also include separate product variants or projects for spiral development. The requirements for these reports shall be specified in the Request For Proposals (RFP). More than one contractor (prime, associate, or subcontractor) may report on a reporting element. The decision about whether or not a contractor reports on a particular reporting element shall be based on the relative importance of the element to cost-estimating requirements.

C6.2.2. Report Submission. Contractors shall submit the required CCDRs showing actual and estimated contract costs at frequencies specified in the contract. Reports shall be prepared in accordance with the guidelines and definitions in the Data Item Descriptions (DIDs) and the following subparagraphs.

C6.2.2.1. Prime contractors and subcontractors are subject to the same criteria in determining reporting requirements. A subcontractor whose contract meets the dollar thresholds and other criteria specified in Chapter 2 of this Manual shall have CCDR requirements included in its contract with the prime contractor. The prime or associate contractor is responsible for incorporating the subcontractor's reporting requirements into the affected contracts.

C6.2.2.2. Subcontractors shall report directly to the DCARC to facilitate processing. A copy of the report may also be provided to the prime contractor if the subcontractor agrees.

C6.2.2.3. Subcontractors subject to CCDR requirements shall follow the instructions in this chapter in the same manner as prime contractors.

C6.2.3. General Guidelines. The general guidelines in the following subparagraphs apply to the preparation of CCDRs.

C6.2.3.1. The Procuring Contracting Officer (PCO) shall request permission in writing to deviate from reporting and frequency requirements specified in RFPs and contracts. The PCO shall coordinate with the DoD Program Manager (PM) to ensure that such deviations are acceptable. The PM, in turn, shall coordinate with the Cost Working-Level Integrated Product Team (CWIPT). If the CWIPT is no longer in existence, THE PM shall coordinate with designated analysts and obtain approval from the DCARC.

C6.2.3.2. Contractors shall report all actual and estimated costs, regardless of contract ceiling or contract type (e.g., Firm Fixed Price). This requirement may result in reported costs being higher than costs actually paid for by the Government. Report all cost data in thousands of dollars rounded to the nearest tenth, unless otherwise specified in the RFP or contract. For example, $245,671,423 would be reported as $245,671.4.

C6.2.3.3. All contractor data sources must be included. In situations where the data cannot be provided in the requested format without a major effort or a major change to the accounting system (e.g., if a contractor's accounting system does not aggregate to a specified cost category), the contractor shall provide a best estimate. The contractor shall provide the basis for the estimate in the "Remarks" section of the appropriate report. Also, the PM will determine the need for the contractor to provide a supporting mapping algorithm that shows how the company cost accounts were allocated to the required DoD structure.

C6.2.3.4. When the same contract contains different models or versions of an end item, separate reports may be required on each model or version. Also, separate reports may be required for different projects within the same program when the spiral development approach is being used. The requirement for separate reporting shall be delineated in the CSDR Plan, the RFP, and the contract. A separate reporting requirement can be expected when there are significant differences in costs or technical characteristics of the models or versions.

C6.2.3.5. Each form contains a section for remarks. Use this section, and additional sheets as required, whenever space provided for a data item is insufficient or the contractor must deviate from the format or definitions. The instructions for a specific form may suggest the use of the "Remarks" section in certain instances.

C6.2.3.6. In the “Remarks” section of each required form, contractors reporting to the Department of Defense shall note the names, purchase orders, and subcontract numbers of subcontractors designated to submit reports directly to the Department of Defense.

C6.2.3.7. Reporting contractors must ensure that the proper security classification, within the meaning of the Espionage Act, is assigned to each report. The latest executive copy of DD Form 254, “Security Requirements Check List,” shall indicate the proper security classification. Do not use terms such as “Secret” or “Confidential” to describe data that is proprietary in nature.

C6.2.3.8. The DoD Components shall protect company information of a proprietary nature. All requests for CCDR information from any non-DoD Government agency or organization shall be processed through the DCARC.

C6.2.3.9. If no costs were incurred during a reporting period, the contractor shall insert a zero (0) in the appropriate place on the form.

C6.2.3.10. Contractors must submit the standard report formats in accordance with the guidelines here and in Appendix 1. DoD PMs may request data other than is provided for on the standard formats, requiring tailoring of the formats. However, these tailored formats should be considered an additional requirement from the DoD PM; they do not replace the standard forms that must be submitted to DCARC.

C6.2.3.11. Both the Definitions section at the front of this Manual and the DIDs for the two CCDR forms in Appendix 1 define recurring and nonrecurring costs. If contractors must deviate from these definitions when reporting, the DCARC requires them to coordinate with the DoD PM and CWIPT to reach an agreement on how costs are to be split between recurring and nonrecurring costs. This agreement must be reached at the same time the CWBS and WBS Dictionary are being prepared, approved and documented as part of the contract CSDR Plan.

C6.2.4. Form Availability. Appendix 1 contains reproductions of the following CCDR forms: DD Form 1921, “Cost Data Summary Report”; its related Data Item Description (DID), DI-FNCL-81565A; DD Form 1921-1, “Functional Cost-Hour and Progress Curve Report”; and its related DID, DI-FNCL-81566A. The DCARC shall use the DIDs as one of the bases for report validation. Copies of DD Form 1921 and DD Form 1921-1 are available from the Washington Headquarters Services Web site (http://web1.whs.osd.mil/ICDHOME/FORMS.HTM). Copies of the Microsoft Excel templates for each report and the CCDR Pre-Processor tool are available from the DCARC Web site (http://dcarc.pae.osd.mil). The reporting contractor is any prime contractor, associate contractor, or subcontractor who is contractually required to submit CCDRs.

C6.3. SOFTWARE RESOURCES DATA REPORTING

This section contains both general guidance and specific instructions to help contractors fulfill the reporting requirements for the DD Form 2630-1 "Software Resources Data Report: Initial Government Report," DD Form 2630-2 "Software Resources Data Report: Initial Developer Report," and 2630-1 "Software Resources Data Report: Final Developer Report."

C6.3.1. Reporting Elements. The forms in the DD Form 2630 series are used to describe the development or upgrade of a major software element.

C6.3.1.1. Any submission of a report in the DD Form 2630 series must be accompanied by an explanatory document, known as a SRDR Data Dictionary, which explains data definitions and any details required to correctly interpret the responses. The described software development or upgrade effort can be the subject of a single software contract, a deliverable release within a larger software effort, or a software component of a larger system contract. The subject development or upgrade can be performed commercially or as an internal ("organic") DoD effort.[5]

C6.3.1.2. The DD Form 2630 series is designed to record both the expectations and actual results of new software developments or upgrades. It is not designed, nor should it be used for, reporting on software maintenance or software operation and sustainment efforts. Similarly, the reporting form should not be used for collecting management tracking measures during the course of a project since the sample data items are not designed to record partial progress or interim results.

C6.3.2. Report Submission. Contractors shall submit SRDRs showing estimated or actual size, effort, and schedule at frequencies specified in the approved contract CSDR Plan. Reports shall be prepared in accordance with the DIDs and the guidelines and definitions in the following subparagraphs.

C6.3.2.1. Prime contractors and subcontractors are subject to the same criteria in determining reporting requirements. A subcontractor whose contract meets the dollar thresholds and other criteria specified in Chapter 2 of this Manual shall have SRDR requirements included in its contract with the prime contractor. The prime or associate contractor is responsible for incorporating the subcontractor's reporting requirements into the affected contracts.

C6.3.2.2. Subcontractors shall report directly to the DCARC to facilitate processing. A copy of the report may also be provided to the prime contractor if the subcontractor agrees.

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5 For convenience, the term *contract* is used in the SRDR parts of the Manual to mean the authorizing vehicle or agreement that describes the software development or upgrade project, whether or not it is in the form of a formal contract.

C6.3.2.3. Subcontractors subject to SRDR requirements shall follow the instructions in this chapter in the same manner as prime contractors.

C6.3.3. General Guidelines. Forms shall be submitted as Excel-readable computer files in order to allow convenient customization of the names and numbers of data items. Each DD Form 2630 series form must be submitted with a similarly customized SRDR Data Dictionary. The sign-off area on page 2 of the forms includes space to identify the file name and revision for the associated SRDR Data Dictionary.

C6.3.4. Form Availability. Appendix 2 contains reproductions of DD Form 1921 2630-1, "Software Resources Data Report: Initial Government Report," DD Form 2630-2, "Software Resources Data Report: Initial Developer Report," and DD Form 2630-3, "Software Resources Data Report: Final Developer Report." Copies of the forms are available from the Washington Headquarters Services Web site (http://web1.whs.osd.mil/ICDHOME/FORMS.HTM). Copies of the Microsoft Excel templates for each report are available from the DCARC Web Site (http://dcarc.pae.osd.mil).

C7. CHAPTER 7
DEFENSE AUTOMATED COST INFORMATION MANAGEMENT SYSTEM

C7.1. INTRODUCTION

This chapter provides the following information about the Defense Automated Cost Information Management System (DACIMS): what it is, how it works, and how it benefits the DoD cost community. It briefly describes the DACIMS system, the various stakeholders (users) that interface with it, and how they use the DACIMS to prepare, submit, view, and download CSDRs.

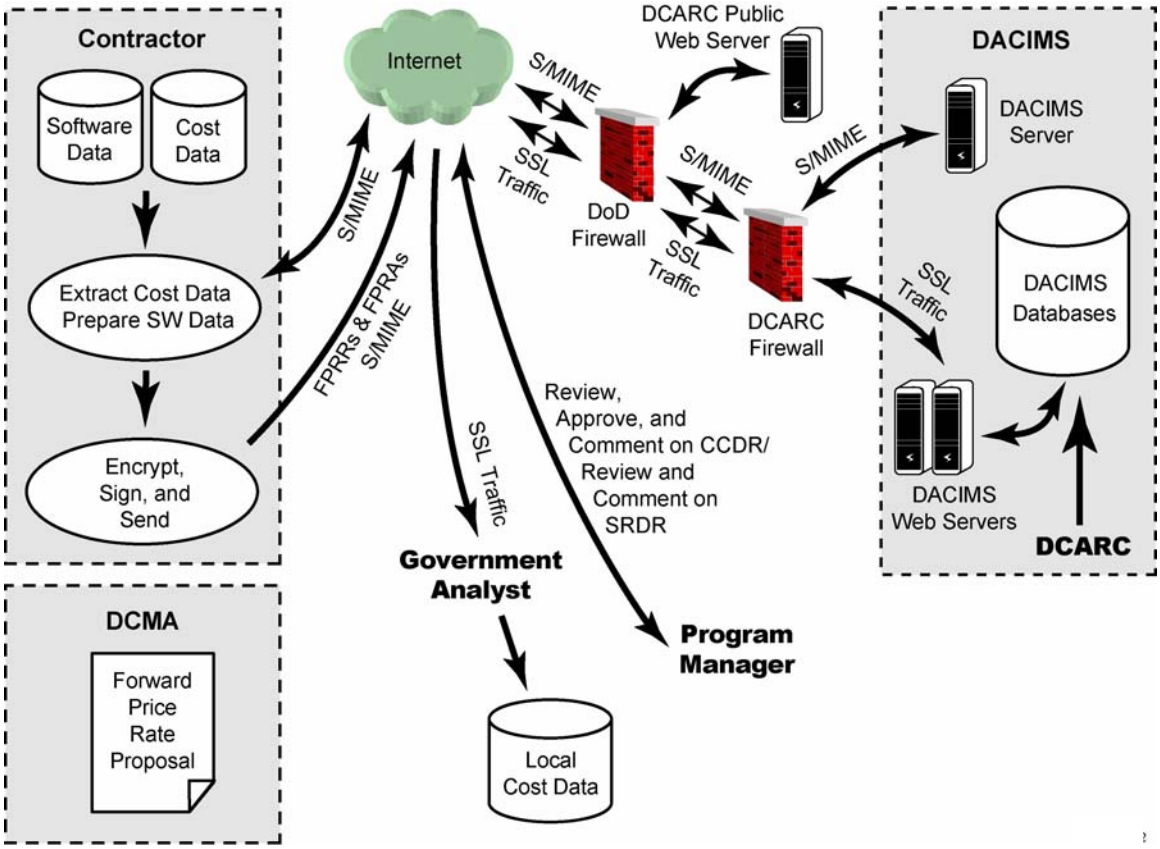
C7.2. GENERAL DESCRIPTION

C7.2.1. Introduction. DACIMS is a secure Web-based information system that hosts the CCDR Database, the SRDR Database, the Cost Research Library, the Automated Cost Database, and the Cost Research Bibliography Library.

C7.2.2. Content. The DACIMS holds over 20,000 CSDRs. The majority of these are scanned images of historical CCDRs; others are in Microsoft Excel format. The number of CSDRs in Excel format is expected to increase since all new CCDRs and SRDRs must be submitted electronically.

C7.2.3. Flow of Data. Figure C7.F11 illustrates the overall flow of data into and out of the DACIMS. The figure shows that weapon system Materiel Developers (MDs) and Defense Contract Management Agency (DCMA) personnel submit CCDRs and SRDRs and Forward Pricing Rate (FRP) data to the DACIMS as secure e-mail attachments through the Internet. The DACIMS permits authorized Government users to view, search, and download files only in a secure manner. Authorized users connect with the DACIMS via a Secured Socket Layer (SSL) connection using an X.509 digital certificate. For information on requesting a certificate, refer to paragraph C7.4.2 of this Manual and the registration instructions on the DCARC Web site (http://dcarc.pae.osd.mil).

Figure C7.F11. DACIMS Architecture



C7.3. DACIMS STAKEHOLDERS

Four types of stakeholders interact with the DACIMS. They are Materiel Developers (MDs), Defense Contracting Management Agency (DCMA) personnel, Program Managers (PMs), and Cost Analysts (CAs). Each type of stakeholder is described in the paragraphs that follow.

C7.3.1. MDs are the contractors, prime contractors, associate contractors, and subcontractors, who have contracts to develop or produce ACAT I weapon systems. They are required to submit CSDRs, and they must submit them to the DACIMS in electronic format. MDs cannot currently view data in the DACIMS.

C7.3.2. DCMA contracting personnel from various DCMA field offices negotiate FPR data (proposals, recommendations, and agreements) for the MD for which they are responsible. They are also responsible for submitting FPR information to the DCARC. The FPR information is intended to replace the discontinued report DD Form 1921-3, “Plant-Wide Data Report.”

C7.3.3. PMs are Government civilian and military personnel who are responsible for monitoring contractors’ execution of approved programs. PM staff members have three

roles in the CSDR process, CSDR planner, CSDR acceptor, and cost estimator. These roles, their associated automation needs, and their relationships to the DACIMS are described here. The PM, in coordination with the CWIPT, develops a CSDR Plan with the CSDR planning tool and submits it electronically to the DCARC for CAIG Chair approval. This information sets the reporting schedule and specifies the content of the CSDRs that MDs submit. Instructions for submitting CSDRs are available on the DCARC Web site (http://dcarc. pae.osd.mil).

C7.3.4. CAs are Government civilian or military personnel who use cost data, including CSDRs, primarily to perform cost analysis on programs. CAs need accurate historical cost data to develop estimates of current and future programs. They may be members of the CAIG, one of the Service cost centers, a commodity command, or a PM's organization. CAs may access the DACIMS through an Internet connection to do the following: search for specific types of weapons systems data; view CCDRs/SRDRs; and download data and CCDRs/SRDRs as Microsoft Excel files, Tagged Image Files (TIFs), or other electronic formats (depending on the formats in which the information was stored).

C7.4. REGISTERING FOR ACCESS TO DACIMS DATA

C7.4.1. Introduction

C7.4.1.1. CSDR reports contain proprietary data that are subject to strict controls and restricted access. The current data-access policy was established by the DCARC, coordinated with the OSD Office of General Counsel and the CSDR Focus Group, and approved by the CAIG Chair. The policy is based on guidance contained in the Federal Acquisition Regulation (FAR) and on the operating environment of the DCARC. The objective is to provide ready and secure access to authorized users while safeguarding the proprietary interests of reporting contractors. Authorization to access the CCDR data is based on a valid need to use the data, as determined by the DCARC. Subject to the limitations in the next subparagraph, the following personnel/entities may obtain access to CSDR data: DoD employees and military personnel, other Federal employees, nonreporting support contractors, and Federally Funded Research and Development Centers (FFRDCs).

C7.4.1.2. The DCARC considers requests for access from Federal employees other than the Department of Defense and military personnel on a case-by-case basis. Any questionable requests are referred to the CAIG Chair for resolution. FFRDCs must have contracts with the Department of Defense that show they require access to CSDR data (see FAR section 35.017).

C7.4.2. Obtaining a Digital Certificate. Authorized users may gain access to specific CSDR data through the electronic DACIMS after registering with the DCARC and obtaining a digital certificate. This certificate is used to establish a secure Web session with DACIMS. After stakeholders register with the DCARC, they may either have access to the data held in the DACIMS or they may be able only to send data to the

DCARC. Authorized users register through the DCARC Web site (http://dcarc.pae.osd.mil) using Netscape Navigator version 4.75 or higher with domestic grade (128-bit) encryption or Microsoft Internet Explorer version 5.5 or higher. The DCARC Web site provides detailed registration instructions. The registration process is the same for most stakeholders. Differences in the registration process for stakeholders authorized to access data and for those authorized only to submit data are explained in the subparagraphs that follow. The registration process detailed here shall be in effect until DACIMS fully implements the DoD Public Key Infrastructure (PKI) policy. The DCARC is developing a migration plan to comply with the DoD PKI policy. Upon implementation, user authentication to DACIMS shall be accomplished only with a certificate issued in accordance with the DoD PKI policy.

C7.4.2.1. Stakeholders Authorized To Access Data. CAs, PMs, and DCMA personnel fall into the category of stakeholders that may have access to DACIMS data. To register as an authorized stakeholder, CAs and PMs must provide information about themselves and their organizations and submit a user identification name. After the registration data is submitted, a DCARC analyst will verify employment in good standing with the organization identified. After the registration information has been verified, the DCARC will generate an X.509 certificate and send an e-mail message with instructions on how to load the certificate and access the DACIMS.

C7.4.2.2. Stakeholders Authorized To Submit Data. MDs and DCMA are the only stakeholders authorized to submit data. MDs submit reports and DCMA submits FPR data to the DACIMS. After the contract is awarded, the MD must begin submitting the CCDRs/SRDRs to the DCARC in accordance with the CAIG approved contract CSDR Plan. To do so, each reporting MD must designate personnel to submit the reports and those individuals must register with the DCARC. MDs and DCMA personnel should register in the same manner as stakeholders with access to the data. The DCARC staff will verify the validity of the request and provide a certificate to allow data to be transferred in the form of attachments to encrypted and digitally signed e-mail messages. Since e-mail systems vary, the DCARC staff will assist the submitter and his or her information technology support staff with installing and testing the certificate. MDs are responsible for notifying the DCARC of any changes to the submitter's point of contact (POC) data.

C7.4.3. Processing Non-Disclosure Agreements. Many Government organizations use support contractors to assist them in performing cost research and analysis. Accordingly, access to CSDR data may be required. Support contractors must obtain NDAs before gaining access to CCDR/CSDR data. When the sponsoring DoD organization and the support contractor identify the specific CCDR/CSDR data, the support contractor shall obtain the MD's standard NDA (directly from the MD) and complete each MD's NDA (or propose modifications), including a description of the data requested. The support contractor signs the NDA and forwards it to the MD POC, along with the cover page and related excerpt from the contract that shows the need for the data. The sponsoring DoD organization and the associated support contractor are

responsible for obtaining the NDA, signed by both parties, from the MD and providing it to the DCARC before access is granted.

C7.5. REPORT PROCESSING

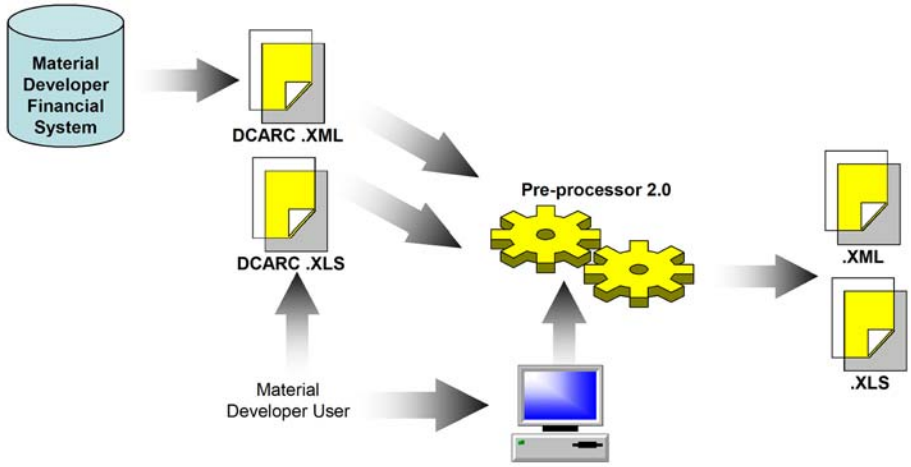
C7.5.1. Preparation

C7.5.1.1. MDs must collect cost and software data and submit the required CSDRs according to their contracts. MDs must extract information from their respective information systems and electronically format the data as specified in the CSDR Plan. MDs must prepare electronic CCDRs in an Excel-readable format or Electronic Data Interchange (EDI) X12 Transaction Set 196 format (for use by contractors who have submitted EDI X12 Transaction Set 196 CCDRs in previous reports for contracts or awarded before October 1, 2003). CSDRs for all new contracts must be submitted in Excel spreadsheet compatible format.

C7.5.1.2. Computer technology has advanced considerably since this software package was originally designed and programmed. In addition, some forms have been modified and a new DD Form 1921-1 form has been added to the cost data collection. DCARC is now upgrading version 1.0 of the CCDR Pre-Processor and considering new architectures to take advantage of the new technologies. Figure C7.F12 shows the general Pre-Processor architecture being considered. These architectures include Web-based software for generating and submitting CCDRs/SRDRs and an Internet-based e-commerce environment for Extensible Markup Language (XML) standards. The explosive growth of Web-based data exchanges allows extension of CCDR/SRDR beyond the current data-collection processes through XML-based integration. The DCARC is working with the EDI to XML working group to develop a CCDR XML standard to replace all the current submission methods. This XML template will be the foundation to automate the data processing, submission, and validation of CCDRs.

C7.5.1.3. MDs may enter CCDR data through an Excel interface and view, print, and save CCDRs. The reports must be saved as an Excel spreadsheet or equivalent. To create the EDI X12 reports, MDs must save the Excel file as an Access database and execute the Pre-Processor Translator. MDs processing older contracts must generate an Access database and then run the Pre-Processor Translator to generate the EDI X12 files. MD data files must match the fixed Access database structure for the Pre-Processor Translator to create EDI X12 files. See the DCARC Web site (http://dcarc.pae.osd.mil) for additional details.

Figure C7.F12. Pre-Processor Architecture



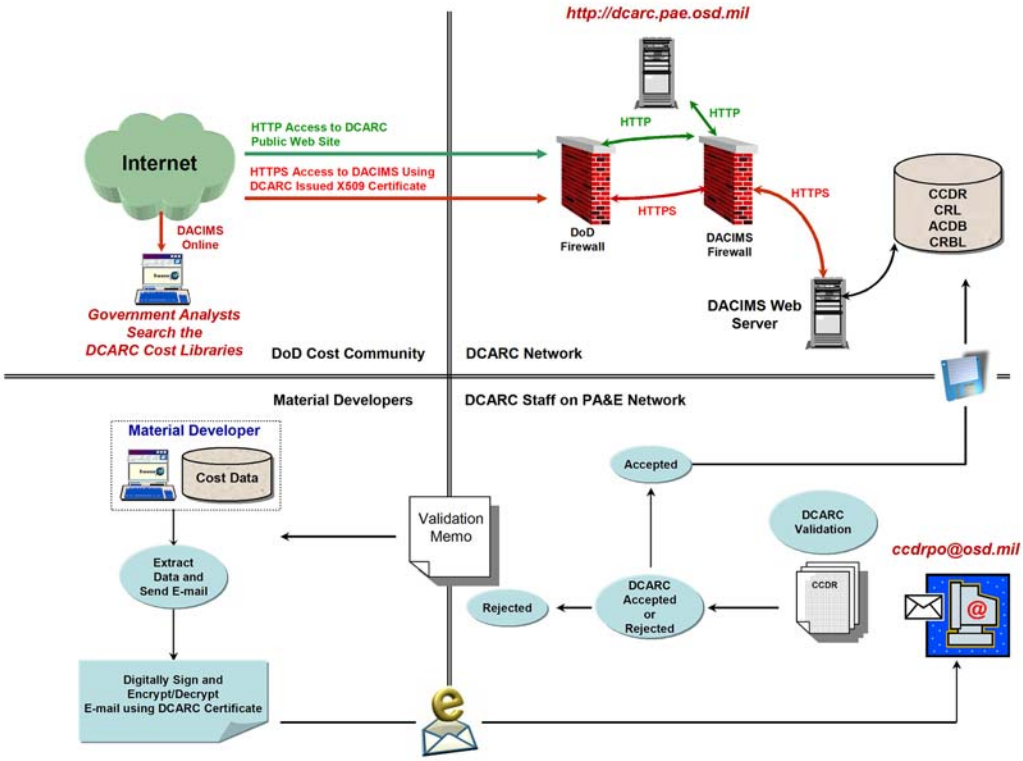
C7.5.2. Submission. Once the electronic CCDRs/SRDRs are prepared, MDs must digitally sign and send them to the DACIMS through the Internet as encrypted e-mail attachments. (See section C7.4. for details.) Figure C7.F13 summarizes the DCARC automation process. Upon receipt, the DACIMS decrypts the file and verifies the authenticity of the sender by checking the digital signature. The DCARC notifies the MD via e-mail that the CCDRs/SRDRs have been received. If the reports are in X12 format, the DACIMS generates, encrypts, and digitally signs a functional acknowledgment receipt (TS 997) and sends it back to the MD. The DCARC is currently working on a web-based data submission feature that would allow MD's to upload data to the DCARC via a Secured Socket Layer using the DCARC digital certificate. Information on use and availability of this service will be posted on the DCARC Web site when available (http://dcarc.pae.osd.mil). Questions about data submission should be sent to ccdrpo@osd.mil.

C7.5.3. Acceptance

C7.5.3.1. Once the submitted CCDRs/SRDRs are received and accepted by the DCARC cost analysts, the DACIMS notifies the appropriate PM's representative and the cognizant CAIG analyst via e-mail that a CCDR/SRDR has been received and must be checked by logging onto the DACIMS. The PM and CAIG analysts have 15 days in which to review, comment on, and approve or reject the reports. At the same time, the DCARC checks the file for business rule compliance.

C7.5.3.2. PMs are able to log into the DACIMS as soon as they receive and load the certificate into their browsers. The CSDRs may be reviewed online or downloaded in Excel format and printed. PMs may make comments about, accept, or reject each CCDR online. For CCDRs/SRDRs that are rejected, the DCARC forwards a problem report to the MD for re-submission by e-mail or in the form of an EDI X12 Transaction Set 864.

Figure C7.F13. DACIMS Automation



C7.5.3.3. Once the PM and CAIG analyst accept the reports (or 15 days pass), the CSDRs are loaded into the DACIMS database for authorized users to view and download through Internet access.

AP1. APPENDIX 1
CCDR DD FORMS AND DATA ITEM DESCRIPTIONS

AP1.1. INTRODUCTION

This appendix contains reproductions of the following DD Forms and Data Item Descriptions (DIDs):

AP1.1.1. DD Form 1921, “Cost Data Summary Report” (Figure AP1.F14), followed by its associated DID, DI-FNCL-81565A;

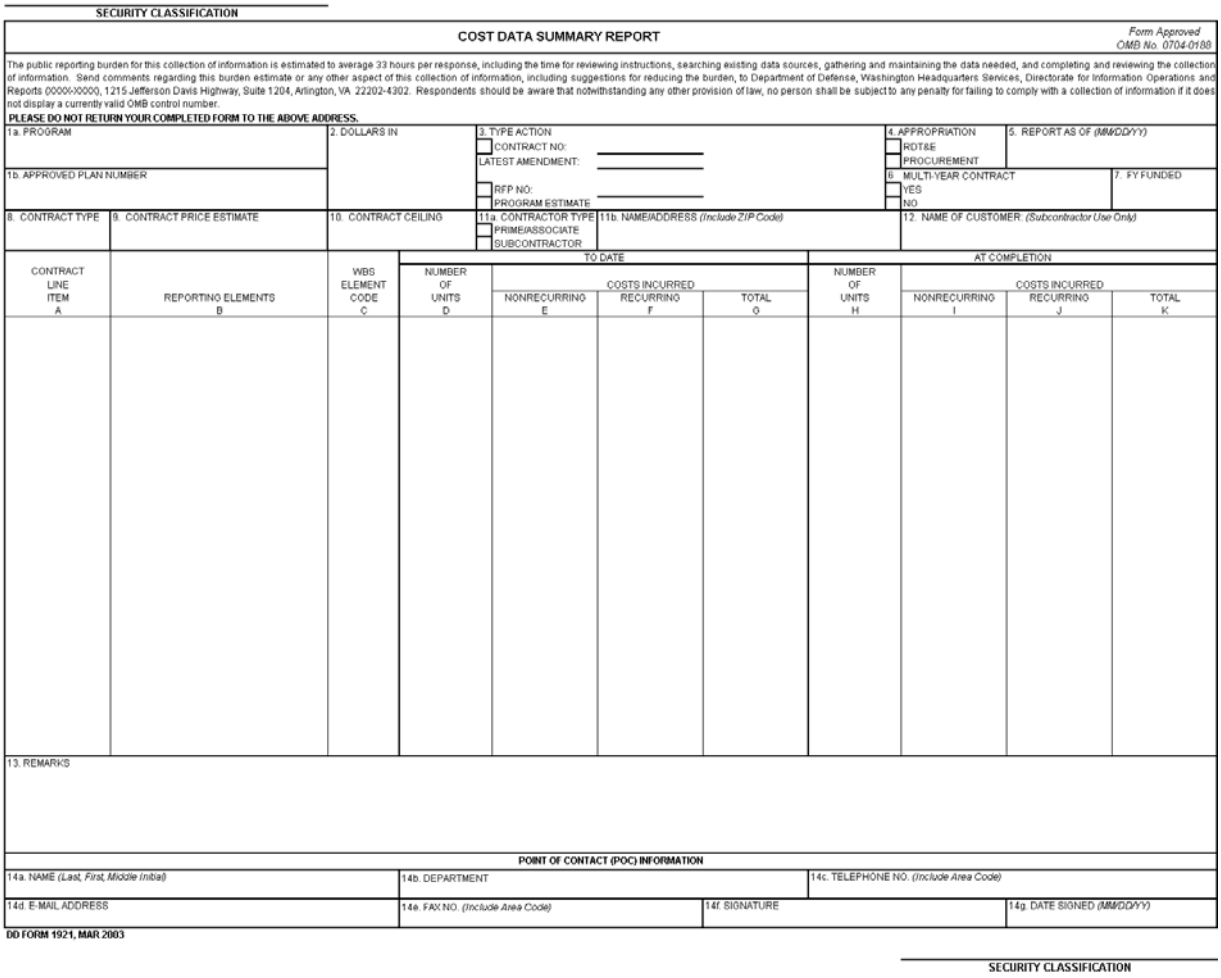
AP1.1.2. DD Form 1921-1, “Functional Cost-Hour and Progress Curve Report” (Figure AP1.F15), followed by its associated DID, DI-FNCL-81566A; and

AP1.1.3. Contract Work Breakdown Structure (CWBS) DID, DI-MGT-81334, including an example of a CWBS index and dictionary.

AP1.2. OBTAINING UPDATES TO FORMS AND DIDS

The forms and DIDs in this appendix were current when the Manual was issued; however, any of them can be changed and approved for release without changing the Manual. The most updated versions of the forms and DIDs are available from the DCARC Web site (http://dcarc.pae.osd.mil).

Figure AP1.F14. DD Form 1921, "Cost Data Summary Report"



SECURITY CLASSIFICATION

COST DATA SUMMARY REPORT

Form Approved OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 33 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0000-X000), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.

1a. PROGRAM	2. DOLLARS IN	3. TYPE ACTION ☐ CONTRACT NO: LATEST AMENDMENT: ☐ RFP NO: ☐ PROGRAM ESTIMATE	4. APPROPRIATION ☐ RDT&E ☐ PROCUREMENT	5. REPORT AS OF *(MMDDYY)*
1b. APPROVED PLAN NUMBER			6. MULTI-YEAR CONTRACT ☐ YES ☐ NO	7. FY FUNDED

8. CONTRACT TYPE	9. CONTRACT PRICE ESTIMATE	10. CONTRACT CEILING	11a. CONTRACTOR TYPE ☐ PRIME/ASSOCIATE ☐ SUBCONTRACTOR	11b. NAME/ADDRESS *(Include ZIP Code)*	12. NAME OF CUSTOMER: *(Subcontractor Use Only)*

			TO DATE				AT COMPLETION			
CONTRACT LINE ITEM A	REPORTING ELEMENTS B	WBS ELEMENT CODE C	NUMBER OF UNITS D	COSTS INCURRED NONRECURRING E	COSTS INCURRED RECURRING F	COSTS INCURRED TOTAL G	NUMBER OF UNITS H	COSTS INCURRED NONRECURRING I	COSTS INCURRED RECURRING J	COSTS INCURRED TOTAL K

13. REMARKS

POINT OF CONTACT (POC) INFORMATION

14a. NAME *(Last, First, Middle Initial)*	14b. DEPARTMENT		14c. TELEPHONE NO. *(Include Area Code)*
14d. E-MAIL ADDRESS	14e. FAX NO. *(Include Area Code)*	14f. SIGNATURE	14g. DATE SIGNED *(MMDDYY)*

DD FORM 1921, MAR 2003

SECURITY CLASSIFICATION

DATA ITEM DESCRIPTION

Title: DD Form 1921, "Cost Data Summary Report"

Number: DI-FNCL-81565A **Approval Date:** 20031031

AMSC Number: D7514 **Limitation:**

DTIC Applicable: **GIDEP Applicable:**

Preparing Activity: (D) OSD/PA&E/CAIG

Applicable Forms: DD Form 1921 (OMB Control No. 0704-0188); 33 hours

Use/Relationship: DD Form 1921 is used to obtain essential cost data from contractors for the purpose of establishing a cost database. Prime contractors and integrating contractors for teaming arrangements with Contractor Cost Data Reporting (CCDR) requirements in their prime contracts are responsible for informing subcontractors and team contractors who meet the reporting thresholds about these requirements. All contractors must submit reports electronically to the Defense Cost and Resource Center (DCARC), where a database of CCDR data is maintained. The database is used to do the following: (1) prepare program cost estimates for major systems reviewed by the Defense Acquisition Board (DAB) and other Component review programs; (2) develop independent Government contract estimates in support of cost and price analyses; and (3) develop estimates to support Analyses of Alternatives (AOAs), Cost As an Independent Variable (CAIV), and long-range planning efforts.

Information acquired through DD Form 1921 includes actual and estimated incurred costs at completion and the number of units being procured by Work Breakdown Structure (WBS). Reporting typically includes level 3 of the contract and subcontract WBS and selected lower-level WBS elements that are high-risk, high-technical interest, or high-value items. Costs include both direct and overhead for each WBS element and are subdivided into recurring and nonrecurring costs. General and Administrative (G&A), undistributed budget, management reserve, facilities cost of money, and profit/loss or fee are shown separately at the bottom of the report and are not included in the individual WBS element costs.

DD Form 1921 reporting is mandatory on Acquisition Category (ACAT) IC and ID program contracts or subcontracts valued over $50 million (in FY 2002 dollars). Contracts priced between $7 million and $50 million (in FY 2002 dollars) are subject to CCDR requirements when the Cost Working-Level Integrated Product Team (CWIPT) determines, and the Cost Analysis Improvement Group (CAIG) agrees, that they are high-risk or high-technical-interest items. Contracts priced below $7 million (in FY 2002 dollars) are not subject to CCDR requirements, even if they are ACAT IC and ID programs. Reporting frequency is tied to program estimating needs as determined by the Program Manager and the CWIPT and approved by the CAIG Chair for ACAT I programs.

This DID summarizes the format for DD Form 1921 and provides preparation instructions to support the specific data and frequency requirements specified in the

contract. DD Form 1921 is related to the other CCDR form, DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report" (DID number DI-FNCL-81566A). Both forms are available for inclusion on any contract that meets the criteria specified above and under other conditions specified for a particular report.

This DID replaces DID number DI-FNCL-81565.

Requirements:

1. *Reference documents*. Mandatory CCDR requirements are contained in DoD Instruction 5000.2.

2. *Format.* Use DD Form 1921 and the detailed preparation instructions below. All reports for new or modified (contain additional work or new CCDR requirements) ACAT IC and ID contracts, awarded after October 1, 2003, must be submitted as secure e-mail attachments, using a certificate issued by the DCARC for encryption and digital signature or by report upload to the secure Web site. The reports must use one of the following: the standard Microsoft Excel, an Excel-readable template, or the latest version of the CCDR Pre-Processor tool available from the DCARC Web site (http://dcarc.pae.osd.mil).

Preparation Instructions:

1. *General Instructions.* For ACAT IC and ID contracts, DD Form 1921 shall be submitted for a contract estimate (see DFARS section 215.403.5) and, if required, a program estimate in response to a Request for Proposals (RFP) and after that as specified in the contract. The Program Manager and the CWIPT review process determine these requirements during the CCDR planning phase. A contractor's program estimate consists of all costs related to the total program as specified by the DoD Component for that particular contractor. Although the program estimate will typically involve the costs for several different contracts, a contract estimate is only for one specified contract.

   For a contractor's program estimate, submit separate DD Form 1921 reports for each fiscal year and for each appropriation when a program involves funding from Research, Development, Test, and Evaluation (RDT&E) and Procurement. Show all dollars related to the buy of a given fiscal year in the report for that year, regardless of the year of expenditure. Make separate entries for items "on contract" and items "not on contract." "On contract" includes dollars for items for which there is a signed contract between the contractor and the Government plus any approved changes or modifications on which contractual agreement has been reached. "On contract" also includes the estimated dollars for items that the contractor has authorization to perform work on but the specific dollars have not been negotiated. "Not on contract" includes additional dollars the contractor anticipates are required (e.g., expected change orders). It also includes changes to the program the Department of Defense has specified to the contractor for possible future consideration but for which no contractual action has been initiated.

2. *Specific Instructions.* The following instructions apply to DD Form 1921.

   a. Item 1a. Program. Enter the approved system designator or the type, model, and series of the prime end item(s) being purchased under contract or being proposed

for contract. If the contract or proposal includes services (research, flight tests, etc.), provide details of the work to be performed. For associate contractors and subcontractors required to report separately, enter the end item being purchased on the contract and the program for which it is being procured (e.g., aft body section of the F-X, wind tunnel tests for the B-X, launch equipment for missile X).

b. Item 1b. Approved Plan Number. Enter the number of the contract CSDR Plan approved by the CAIG Chair that authorized the collection of data for this report.

c. Item 2. Dollars In. Report all cost data in thousands of dollars rounded to the nearest tenth, unless otherwise specified in the RFP or contract.

d. Item 3. Type Action. Check the box that most accurately describes the data being reported. If reporting on a contract estimate, *enter the assigned contract number as well as the number of the latest contract amendment*. If the data are in response to an RFP, enter the RFP number.

e. Item 4. Appropriation. Check the appropriate box to indicate the type of appropriation, RDT&E or Procurement, used to fund the contract. If funding other than RDT&E and Procurement is used, do not check a box but note the specific type of funds in the "Remarks" section (item 13). For contractor program estimates, leave item 4 blank, unless otherwise specified by the DoD Component.

f. Item 5. Report As Of. Enter the appropriate numbers for the month, last day, and year of the reporting period. For example, December 31, 2002, would be shown as 12/31/02.

g. Item 6. Multi-Year Contract. If the contract is funded from a single fiscal year, check "No" and enter the specific fiscal year funding the contract in the "Remarks" section (item 13). However, if the report pertains to an incrementally funded Research and Development (R&D) contract, check "Yes" and enter all the fiscal years covered by the contract in the "Remarks" section. In some cases, contractors may be operating under a multi-year contract that provides for annual increments of the quantities procured under the contract. This type of contract is an example of Multi-Year Procurement (MYP), identified by the following characteristics: the Government negotiates the contract for the quantities to be procured in more than one year; contract quantities are budgeted and financed in accordance with the program year for which each quantity is authorized; and funds are obligated only for the first year's quantity, with succeeding years' contract quantities funded annually thereafter. In the event funds are not made available to support one or more succeeding year's quantities, the contract shall be canceled. However, contractors are protected from loss by the terms of the contract cancellation-ceiling clause. For MYP contracts described above, check "Yes" and enter each fiscal year of funding covered by the report. You may be required to submit a separate report by type of funds and fiscal year on designated reporting elements.

h. Item 7. FY Funded. Enter the fiscal year for which data are being reported. If the contract being reported contains more than one fiscal year, show the current year

in item 7 and the remaining years in the "Remarks" section (item 13). If the data being reported are for program estimates, leave item 7 blank and enter one of the following options for years to be covered: prior fiscal years, fiscal year – 2, fiscal year – 1, current fiscal year, fiscal year + 1, fiscal year + 2, fiscal year + 3, fiscal year + 4, fiscal year + 5, fiscal year + 6, balance to complete, and total program. For contractor program estimates, always include prior fiscal years, balance to complete, and total program values.

i. Item 8. Contract Type. Enter the Electronic Data Interchange (EDI) code for the type of contract for which data are being reported. The codes for the contract types included in the Federal Acquisition Regulation (FAR) are listed in the table below. Follow the instructions that correspond with contractual submission requirements. For contractor program estimates, leave item 8 blank, unless otherwise specified by the DoD Component.

EDI Code by FAR Contract Type

FAR Contract Types	EDI Code
Cost Reimbursement Contracts	
Cost Sharing (CS)	CH
Cost Plus Award Fee (CPAF)	CW
Cost Plus Fixed Fee (CPFF)	CX
Cost Plus Incentive Fee (CPIF)	CY
Cost Plus Incentive Fee (With Performance Incentives)	CA
Cost Plus Incentive Fee, Award Fee (CPIF/AF)[a]	CY
Fixed Price Contracts	
Firm Fixed Price (FFP)	FR
Fixed Price Incentive Fee (FPIF)	FI
Fixed Price Incentive Successive (Targets) (FPIS)	FI
Fixed Price Incentive Successive Target (With Performance Incentive)	FF
Fixed Price Incentive Firm Target (With Performance Incentive)	FB
Fixed Price with Award Fee (FP/AF)	FH
Fixed Price with Economic Price Adjustment (FP/EPA)	FX
Fixed Price with Prospective Price Redetermination (FP/PPR)	FD
Fixed Ceiling Price with Retroactive Price Redetermination (FCP/RPR)	FM
Firm Fixed Price, Level of Effort Term (FFP/LOET)	FJ
Letter Contracts (LC)	OC

[a] This type of contract exists but is not included in the FAR.

If the contract type is not in the table, enter the EDI contract code "OC" in the space provided. In addition, enter the name of the contract type in the "Remarks" section (item 13) followed by the EDI code "OC".

If the contract type is CPIF, CPIF/AF, FPIF, or FPIS, include a reference to the complete name of the contract type in the "Remarks" section (item 13).

j. Item 9. Contract Price Estimate. Enter the total contract price value. If the contract is FFP, FP/EPA, FP/PPR, or FCP/RPR, enter the total negotiated cost and profit for work to be performed. For all incentive and cost contracts, enter the negotiated target costs, profit or fee, and cost incentive arrangements (i.e., 70-30, 60-40)

where applicable. Enter all incentive sharing arrangements using the "Remarks" section (item 13) as necessary.

k. Item 10. Contract Ceiling. Enter the amount of the contract ceiling, if applicable.

l. Item 11a and b. Contractor Type and Name/Address. In item 11a check "Prime/Associate" if you are the prime or associate contractor for the work. If you are a subcontractor, check "Subcontractor." Enter the name, division (if applicable), and address of the reporting prime contractor, associate contractor, or subcontractor in item 11b.

m. Item 12. Name of Customer (Subcontractor Use Only). If a subcontractor is submitting the report, enter the name of the customer for whom the work on contract is being performed. Also enter the number of the prime contractor's contract with the Government customer. If a prime or associate contractor is submitting the report, leave this item blank.

n. Contract Line Item. Column A. In the space provided, enter the contract line item number that relates to the individual reporting element in Column B.

o. Reporting Elements. Column B. Enter the WBS reporting elements specified in the contract Cost and Software Data Reporting (CSDR) Plan approved by the CAIG Chair and included in the contract. The PM in coordination with the CWIPT shall incorporate all proposed reporting element changes in a revised CSDR Plan for review and approval by the CAIG Chair before changing the contract or other reporting direction. Nevertheless, if there have been changes to the list of reporting elements that are not reflected in the contract or approved CSDR Plan, note these discrepancies in the "Remarks" section (item 13).

p. WBS Element Code. Column C. Enter the WBS element code for the reporting element being reported in Column B in accordance with the Contract CSDR Plan approved by the CAIG Chair. Typically, this code is used to identify the WBS structure and related indenture.

q. Number of Units To Date and At Completion. Columns D and H. In Column D, enter the cumulative number of equivalent units actually completed to date. Equivalent units represent the total of completed units plus work completed on partially completed units translated into an equivalent number of totally completed units. Note the methodology used to determine equivalent units in the "Remarks" section (item 13). Separately identify the number of fully completed units. In Column H, enter the number of units to be procured under this contract for each reporting element. For R&D contracts, enter two quantity amounts for any reported WBS element that includes items to be procured or produced. The first entry is the quantity to be procured and delivered to the Government. The second quantity represents the number of units the contractor will use internally during contract performance (e.g., testing). For example, suppose that for an interim CCDR the actual quantity (equivalent units) of deliverable units produced to date was 5.4 and the quantity of internal units produced to date was 2.3. In this case, enter 5.4/2.3 in the number of units or quantity field to date for the specific WBS element. Further, assume that at completion of the contract 12 units were to

be delivered and 4 systems would be used internally. Then, enter 12/4 in the number of units or quantity field at completion for that same WBS element. This breakout of equivalent units between Government deliveries and internal contractor use is not required on production contract reporting unless the CWIPT in coordination with the contractor identifies and justifies the need for purposes of estimating costs.

r. Costs Incurred To Date and At Completion—Nonrecurring, Recurring, and Total. Columns E, F, G, I, J, and K. Enter actual incurred costs and estimated incurred costs at completion by segregating costs into the following three categories: nonrecurring costs, recurring costs, and total cost.

The table below summarizes the reporting requirements of prime contractors for both their data and related subcontract data. Subcontractor data refers to all contractors below the prime (regardless of specific tier) that meet CCDR reporting thresholds. Typically, subcontractors will report directly to the Department of Defense/DCARC. However, on an exception basis, subcontractors can report through the prime contractor. In these cases, the prime contractors must report both recurring and nonrecurring costs of subcontractors from whom they receive data. For subcontractors who instead report their recurring/nonrecurring split directly to the Department of Defense/DCARC, prime contractors need only show total costs. Prime contractors with CCDR requirements must provide an estimated split between recurring and nonrecurring costs for subcontractors without CCDR requirements (referred to in the table as "nonreporting subcontractors").

Summary of Reported DD Form 1921 Data

DD Form 1921 Data Provided by Prime Contractors	Recurring Costs	Nonrecurring Costs	Total Costs
Prime contractor data	◆	◆	◆
Subcontractor data			
Subcontractors reporting to prime contractor	◆	◆	◆
Subcontractors reporting to DoD	❖	❖	◆
Nonreporting subcontractors	☐	☐	◆

◆ Available to and reported by prime contractor.
❖ Not reported by prime contractor (data available to DoD analysts only).
☐ Estimated and reported by prime contractor.

For the reporting elements in Column B that that apply to nonreporting subcontractors, include all estimated costs except General and Administrative (G&A) expenses. For reporting elements in Column B reported to the prime (by a subcontractor) separately, enter the incurred costs and estimates at completion as reported by the subcontractor. For elements that are separately reported to the Department of Defense, use price data from subcontractor billings and other relevant cost data for incurred costs to date (Column G) and the estimated price at completion for estimated incurred costs (Column K).

Report all costs without regard to ceilings established for incentive contracts or the price on firm fixed price contracts. When the total anticipated recurring or

nonrecurring costs on a contract is estimated to be 95 percent or more of the total cost at contract completion, report all cost data for each reporting element as either recurring or nonrecurring in Columns E or F and I or J, as appropriate. In these cases, the total contract split determines the breakout for each individual reporting element regardless of the actual recurring/nonrecurring split attributed to each element. If no costs have actually been incurred, leave Columns E, F, and G (costs incurred to date) blank.

All reported data must reflect the reporting contractor's best estimate for performing currently authorized work plus any additional directed work for which execution or negotiation of amendments is pending. This includes work not formally included in the contract price. These estimates shall be used for planning purposes only and shall not be binding on either the contractor or DoD.

The following summary entries also apply to Columns G and K. Enter the information described below on a separate line in the appropriate column(s), below the level of the last reporting element in Column B.

(1) Subcontractor G&A. Enter in Columns G and K the cumulative G&A costs to date and estimated cost at completion for each of the subcontractors who report data to you. Then submit the subcontractor's report to the Government along with your own report. For subcontractors reporting directly to the Government, no entry is required since such costs are included in the data reported under each reporting element. These values cover all work performed by the subcontractor and do not relate to any specific reporting element.

(2) Other Subcontractor Miscellaneous. Enter the appropriate miscellaneous subcontractor costs in Columns G and K.

(3) Subcontractor Undistributed Budget. Enter the appropriate undistributed budget amounts in Columns G and K.

(4) Subcontractor Management Reserve. Enter the appropriate management reserve amounts in Columns G and K.

(5) Subcontractor Facilities Capital Cost of Money. Enter the appropriate facilities capital cost of money in Columns G and K.

(6) Total Cost (Less Subcontractor Profit or Fee). Enter the total subcontractor costs, less profit or fee in Columns G and K.

(7) Subcontractor Profit or Fee. Enter in Columns G and K the profit or fee at completion for each of the subcontractors who provide you data. Then submit the subcontractor's report to the Government with your own. For subcontractors reporting directly to the Government, no entry is required since such costs are included in the summary entries of the subcontractor's report to Department of Defense. These values must cover all work performed by the subcontractor and not relate to any specific reporting element.

(8) Total Cost (Less Reporting Contractor's G&A and Profit or Fee). Enter the total cost less G&A costs and profit or fee in Column K.

(9) Reporting Contractor G&A. Enter G&A costs incurred to date and at completion in Columns G and K.

(10) Other Reporting Contractor Miscellaneous. Enter miscellaneous contractor costs incurred to date and at completion in Columns G and K.

(11) Reporting Contractor Undistributed Budget. Enter the appropriate undistributed budget amounts in Columns G and K.

(12) Reporting Contractor Management Reserve. Enter the appropriate management reserve amounts in Columns G and K.

(13) Reporting Contractor Facilities Capital Cost of Money. Enter the appropriate facilities capital cost of money in Columns G and K.

(14) Total Cost (Less Contractor Profit or Fee). Enter the total contractor costs, less profit or fee, in Columns G and K.

(15) Reporting Contractor Profit or Fee. Enter in Columns G and K the total of all profit or fee in accordance with the terms of the contract (e.g., incentive formula).

(16) Total Cost (Through Reporting Contractor G&A and Profit or Fee). In Columns G and K, enter the sum of the following line entries: Total Cost (less the reporting contractor's G&A and profit or fee), Reporting Contractor G&A, Other Reporting Contractor Miscellaneous Items, and Reporting Contractor Profit or Fee.

s. Item 13. Remarks. Note any relevant information that could be used in the interpretation of the data provided via this report.

t. Items 14a through g. Point of Contact (POC) Information. Enter the following information for the person to contact for answers to any questions about entries on DD Form 1921: last name, first name, and middle initial (item 14a); department (14b); telephone number including area code (14c); e-mail address (14d); fax number (14e); digital signature (14f); and date signed (14g).

Definitions:

1. *Costs Incurred*. Costs incurred (or Actual Costs) represent costs identified through the use of the accrual method of accounting and reporting or otherwise actually paid. Such costs include the cost of direct labor, direct materials, and direct services identified with and necessary for the performance of a contract, as well as all properly allocated and allowable indirect costs shown in the contractor's books.
2. *Facilities Cost of Money*. Facilities cost of money is an imputed cost determined by applying a cost-of-money rate to facilities capital employed in contract performance. Capital employed is determined without regard to whether its source is equity or borrowed capital. The resulting cost of money is not a form of interest on borrowing.

3. *General and Administrative (G&A)*. G&A refers to indirect expenses related to the overall management and administration of the contractor's business unit, including the following: a company's general and executive offices; the cost of staff services such as legal, accounting, public relations, financial, and similar expenses; and other general expenses. G&A is also a generic term used to describe expenses whose beneficial or causal relationship to cost objectives that cannot be more accurately assigned to overhead areas for engineering, manufacturing, material, and so on.
4. *Management Reserve*. Management reserve is the amount of the total allocated budget that is held back for management control and risk purposes at the total contract level rather than designated for the accomplishment of specific tasks.
5. *Profit/Loss or Fee*. Profit is the excess of revenues over expenses in fixed-price contracts. Loss is the excess of expenses over revenue in contracts that contain limited Government liability such as fixed-price contracts and cost plus contracts with cost ceilings. In special cost-reimbursement pricing arrangements, fee is a form of profit representing an agreed-to amount beyond the initial estimate of costs that reflects a variety of factors, including risk, and is subject to statutory limitations. Fee may be fixed at the outset of performance, as in a cost-plus-fixed-fee arrangement, or may vary (within a contractually specified minimum-maximum range) during performance, as in a cost-plus-incentive-fee arrangement.
6. *Recurring and Nonrecurring Costs*. The following guidelines for distinguishing between recurring and nonrecurring costs apply to all reporting contractors (i.e., prime contractors, associate contractors, subcontractors, and lower-tier contractors). While these guidelines are useful for establishing general boundaries, time reported on recurring and nonrecurring tasks should be reported as work is performed. For example, technical management tasks should be reported as recurring and nonrecurring to reflect the work actually being done rather than aggregated and reported as nonrecurring. Also, test activities that will routinely continue into production should be recorded as recurring costs.
    a. Recurring Costs. Recurring costs are repetitive elements of development and investment costs that may vary with the quantity being produced during any program development or production phase. For example, during the development phase, repetitive production-like costs incurred when producing prototype and test units, whether they be for the customer or for contractor use, are considered recurring costs. Recurring costs include the following: engineering required for redesign, modifications, reliability, maintainability, and associated evaluation and liaison; complete reporting elements produced either for test or for operational use; tool maintenance, modification, rework, and replacement; training Service personnel to operate and maintain equipment; and reproduction and update of technical data and manuals.
    b. Nonrecurring Costs. Nonrecurring costs are those elements of development and investment costs that are not repetitive (i.e., they generally occur only once or infrequently in the life cycle of a system). Such costs are often found in engineering, system test, tooling, and pre-production activities, and also include basic design and development through first release of engineering drawings and

data, all system and subsystem test activities (except end item acceptance testing), configuration audits, qualification testing, technical publications through initial release, basic tool and production planning through initial release, all basic tooling, engineering models, partially built units for development or test purposes only, units not built to operational or tactical configuration, and specialized work force training.

7. *Undistributed Budget*. Undistributed budget is that portion of the budget applicable to program effort that has not yet been allocated to control account budgets or to management reserve.

End of DI-FNCL-81565A

Figure AP1.F15. DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report" (Page 1)

SECURITY CLASSIFICATION

FUNCTIONAL COST-HOUR AND PROGRESS CURVE REPORT

Form Approved OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 45 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (XXXX-XXXX), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if **PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.**

1a. PROGRAM	1b. APPROVED PLAN NUMBER	2. REPORT AS OF *(MM/DD/YY)*	3. FY FUNDED	
4a. CONTRACTOR TYPE ☐ PRIME/ASSOCIATE ☐ SUBCONTRACTOR ☐ SUBCONTRACT *(Estimate by Reporting Contractor)* 4b. NAME/ADDRESS *(Include ZIP Co*			5. DOLLARS IN	6. HOURS IN
7a. CUSTOMER *(Subcontractors Use Only)*	7b. SUBCONTRACTOR *(Estimated by Reporting Contractor)*	8. SUBCONTRACT NO.		
9. NUMBER OF REPORTING SUBCONTRACTORS	10. TYPE ACTION ☐ CONTRACT NO. _____ LATEST AMENDMENT _____ ☐ RFP NO. _____ ☐ PROGRAM ESTIMATE			
11. MULTI-YEAR CONTRACT ☐ YES ☐ NO				

PART I. FUNCTIONAL COST-HOUR REPORT

12. WBS ELEMENT CODE	14. COST TYPE ☐ RECURRING ☐ NONRECURRING ☐ TOTAL	15. NUMBER OF UNITS TO DATE / AT COMPLETION	16. APPROPRIATION ☐ RDT&E ☐ PROCUREMENT
13. REPORTING ELEMENT			

DATA ELEMENTS	REPORTING CONTRACTOR TO DATE A	REPORTING CONTRACTOR AT COMPLETION B	SUBCONTRACT/OUTSIDE PRODUCTION AND SERVICES TO DATE C	SUBCONTRACT/OUTSIDE PRODUCTION AND SERVICES AT COMPLETION D	TOTAL TO DATE E	TOTAL AT COMPLETION F
ENGINEERING						
1. DIRECT LABOR HOURS						
2. DIRECT LABOR DOLLARS						
3. OVERHEAD						
4. MATERIAL						
5. OTHER DIRECT CHARGES *(Specify)*						
6. TOTAL DOLLARS						
TOOLING						
7. DIRECT LABOR HOURS						
8. DIRECT LABOR DOLLARS						
9. OVERHEAD						
10. MATERIAL AND PURCHASED TOOLS						
11. OTHER DIRECT CHARGES *(Specify)*						
12. TOTAL DOLLARS						
QUALITY CONTROL						
13. DIRECT LABOR HOURS						
14. DIRECT LABOR DOLLARS						
15. OVERHEAD						
16. OTHER DIRECT CHARGES *(Specify)*						
17. TOTAL DOLLARS						
MANUFACTURING						
18. DIRECT LABOR HOURS						
19. DIRECT LABOR DOLLARS						
20. OVERHEAD						
21. RAW MATERIALS AND PURCHASED PARTS						
22. OTHER DIRECT CHARGES *(Specify)*						
23. TOTAL DOLLARS						
OTHER COSTS						
24. PURCHASED EQUIPMENT						
25. MATERIAL OVERHEAD						
26. OTHER COSTS NOT SHOWN ELSEWHERE *(Specify)*						
SUMMARY						
27. TOTAL COST *(Direct and Overhead)*						

28. REMARKS

POINT OF CONTACT (POC) INFORMATION

29a. NAME *(Last, First, Middle Initial)*	29b. DEPARTMENT	29c. TELEPHONE NO. *(Include Area Code)*	
29d. E-MAIL ADDRESS	29e. FAX NO. *(Include Area Code)*	29f. SIGNATURE	29g. DATE SIGNED *(MM/DD/YY)*

DD FORM 1921-1 (FRONT), SEP 2003

SECURITY CLASSIFICATION

Figure AP1.F15. DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report" (Page 2)

SECURITY CLASSIFICATION

FUNCTIONAL COST-HOUR AND PROGRESS CURVE REPORT

PART II. PROGRESS CURVE REPORT

1. WBS ELEMENT CODE	3. UNITS/LOTS COMPLETED ☐ UNIT TOTAL ☐ LOT TOTAL ☐ UNIT AVERAGE ☐ LOT AVERAGE
2. REPORTING ELEMENT	

DATA ELEMENTS	COMPLETED UNITS/LOTS A				WORK-IN-PROCESS (WIP) B	AT COMPLETION C
	1	2	3	4		
1. MODEL AND SERIES						
2. FIRST UNIT OF LOT/WIP UNITS						
3. LAST UNIT OF LOT						
4. CONCURRENT UNITS/LOTS						
CHARACTERISTICS						
5a.						
5b.						
5c.						
REPORTING CONTRACTOR						
6. DIRECT QUALITY CONTROL LABOR HOURS						
7. DIRECT MANUFACTURING LABOR HOURS						
8. TOTAL DIRECT LABOR HOURS						
9. DIRECT QUALITY CONTROL LABOR DOLLARS						
10. DIRECT MANUFACTURING LABOR DOLLARS						
11. TOTAL DIRECT LABOR DOLLARS						
12. RAW MATERIALS AND PURCHASED PARTS						
13. PURCHASED EQUIPMENT						
14. TOTAL DIRECT DOLLARS						
SUBCONTRACT/OUTSIDE PRODUCTS AND SERVICES						
15. DIRECT QUALITY CONTROL LABOR HOURS						
16. DIRECT MANUFACTURING LABOR HOURS						
17. TOTAL DIRECT LABOR HOURS						
18. DIRECT QUALITY CONTROL LABOR DOLLARS						
19. DIRECT MANUFACTURING LABOR DOLLARS						
20. TOTAL DIRECT LABOR DOLLARS						
21. RAW MATERIALS AND PURCHASED PARTS						
22. PURCHASED EQUIPMENT						
23. TOTAL DIRECT DOLLARS						
TOTAL PER UNIT/LOT						
24. DIRECT QUALITY CONTROL LABOR HOURS						
25. DIRECT MANUFACTURING LABOR HOURS						
26. TOTAL DIRECT LABOR HOURS						
27. DIRECT QUALITY CONTROL LABOR DOLLARS						
28. DIRECT MANUFACTURING LABOR DOLLARS						
29. TOTAL DIRECT LABOR DOLLARS						
30. RAW MATERIALS AND PURCHASED PARTS						
31. PURCHASED EQUIPMENT						
32. TOTAL DIRECT DOLLARS						
33. % SUBCONTRACT OR OUTSIDE PRODUCTION AND SERVICE						

34. REMARKS

POINT OF CONTACT (POC) INFORMATION

35a. NAME *(Last, First, Middle Initial)*	35b. DEPARTMENT	35c. TELEPHONE NO. *(Include Area Code)*	
35d. E-MAIL ADDRESS	35e. FAX NO. *(Include Area Code)*	35f. SIGNATURE	35g. DATE SIGNED *(MM/DD/YY)*

DD FORM 1921-1 (BACK), MAR 2003

SECURITY CLASSIFICATION

DATA ITEM DESCRIPTION

Title: DD Form 1921-1 "Functional Cost-Hour and Progress Curve Report"

Number: DI-FNCL-81566A **Approval Date:** 20031031

AMSC Number: D7516 **Limitation:**

DTIC Applicable: **GIDEP Applicable:**

Preparing Activity: (D) OSD/PA&E/CAIG

Applicable Forms: DD Form 1921-1 (OMB Control No. 0704-0188); 45 hours

Use/Relationship: DD Form 1921-1 is used to obtain essential cost data from contractors for the purpose of establishing a cost database. Prime contractors and integrating contractors for teaming arrangements with Contractor Cost Data Reporting (CCDR) requirements in their prime contracts are responsible for informing subcontractors and team contractors who meet the reporting thresholds about these requirements. All contractors must submit reports electronically to the Defense Cost and Resource Center (DCARC), where a database of CCDR data is maintained. The database is used to do the following: (1) prepare program acquisition cost estimates for major systems reviewed by the Defense Acquisition Board (DAB) and other Component reviewed programs, (2) develop independent Government contract estimates in support of cost and price analyses, and (3) develop estimates to support Analyses of Alternatives (AOAs), Cost As an Independent Variable (CAIV), and long-range planning efforts. DD Form 1921-1 consists of two major parts: Part I, Functional Cost-Hour Report, and Part II, Progress Curve Report.

Part I, Functional Cost-Hour Report, displays actual costs by functional category (i.e., Engineering, Manufacturing, Quality Control, Tooling, and Other); each functional area is broken out by direct labor hours and cost category (e.g., Direct Labor, Material, Other Direct Costs, and Overhead). General and Administrative (G&A) expenses and profit or fee are reported separately at the bottom of the report. Part I data is further subdivided into recurring and nonrecurring costs. Part I data must also be submitted for the total contract and for selected WBS elements as identified by the Program Manager and the Cost Working-Level Integrated Product Team (CWIPT) process. The elements selected for reporting should be high-cost, high-risk, or high-technological-interest items.

Part II, Progress Curve Report, shows actual and estimated "to complete" recurring costs by unit or lot for selected reporting elements. Part II data are required only on high-risk or high-quantity programs from Research and Development through the completion of Low-Rate Initial Production (LRIP) and the initial year of the Full-Rate Production buy. Additional years for Full-Rate Production buys can be added if needed for purposes of estimating costs. The CWIPT makes these determinations for approval by the Cost Analysis Improvement Group (CAIG) Chair. For purposes of estimating cost, the CWIPT is responsible for defining units and lots for its particular programs and contracts. Lot definition for reporting purposes should be agreed upon by the contractor and the DoD customer before reporting begins. Part II data also includes direct labor hours and costs for Quality Control and Manufacturing. Within these categories, costs are further

subdivided by major cost category to include Manufacturing, Quality Control, Purchased Equipment, and Material and Purchased Parts. These data are primarily used to develop progress or learning curves.

DD Form 1921-1 reporting is mandatory on Acquisition Category (ACAT) IC and ID program contracts or subcontracts valued over $50 million (in FY 2002 dollars). Contracts priced between $7 million and $50 million (in FY 2002 dollars) are subject to CCDR reporting requirements when the CWIPT determines, and the CAIG agrees, that they are high-risk or high-technical-interest items. Contracts priced below $7 million (in FY 2002 dollars) are not subject to CCDR reporting. The 1921-1 requirement is limited to selected high-cost, high-risk, or high-technological-interest reporting elements on both contracts and subcontracts. Reporting frequency is tied to program estimating needs, as determined by the Program Manager and the CWIPT for ACAT IC and ID programs.

This DID summarizes the format for DD Form 1921-1 and provides preparation instructions to support the specific data and frequency requirements specified in the contract. DD Form 1921-1 is related to the other CCDR form, DD Form 1921, "Cost Data Summary Report" (DID number DI-FNCL-81565A). Both reports are available for inclusion on any given contract that meets the criteria specified above and any other conditions specified for a particular report.

This DID replaces DID numbers DI-FNCL-81566 and DI-FNCL-81567.

Requirements:

1. *Reference documents.* . Mandatory CCDR requirements are contained in DoD Instruction 5000.2.
2. *Format.* Use DD Form 1921-1 and the detailed instructions below. All reports for new or modified (contain additional work or new CCDR requirements) ACAT IC and ID contracts, awarded after October 1, 2003, must be submitted as secure e-mail attachments, using a certificate issued by the DCARC for encryption and digital signature or by report upload to the secure Web site. The reports must use one of the following: the standard Microsoft Excel, an Excel-readable template or the CCDR Pre-Processor tool available from the DCARC Web site (http://dcarc.pae.osd.mil).

Preparation Instructions:

1. *General Instructions.* The following instructions apply for entering data items 1 through 13 in DD Form 1921-1. These items apply to both Part I and Part II reporting requirements.
    a. Item 1a. Program. Enter the approved system designator or the type, model, and series of the primary end item(s) being purchased under contract or being proposed for contract. If the contract or proposal includes services (research, flight tests, etc.), provide details of the work to be performed. Associate contractors and subcontractors required to report separately must enter the end item being purchased on the contract and the program for which it is being procured (e.g., afterbody section of the F-X, wind tunnel tests for the B-X, launch equipment for missile X).

b. Item 1b. Approved Plan Number. Enter the number of the approved contract CSDR Plan that authorized the collection of data for this report.

c. Item 2. Report As Of. Enter the appropriate numbers for the month, last day, and year of the reporting period. For example, December 31, 2002, would be shown as 12/31/02.

d. Item 3. FY Funded. Enter the fiscal year for which data are being reported. If the contract data being reported relate to more than one fiscal year, show the most current fiscal year in item 3 and the remaining years in the "Remarks" section for Part I (item 28). If the data being reported are program estimates, select from the following options of years to be covered: prior fiscal years, fiscal year – 2, fiscal year – 1, current fiscal year, fiscal year + 1, fiscal year + 2, fiscal year + 3, fiscal year + 4, fiscal year + 5, fiscal year + 6, balance to complete, or total program. For contractor program estimates, always include prior fiscal years, balance to complete, and total program values.

e. Item 4a and b. Contractor Type and Name/Address. Check "Prime/Associate" in item 4a if you are the prime or associate contractor for the work. If you are a subcontractor reporting to the Department of Defense or to the prime contractor, check "Subcontractor." Check "Subcontract" if you are the prime contractor preparing subcontract estimates for nonreporting subcontractors. In item 4b, enter the name, division (if applicable), and address of the reporting prime contractor, associate contractor, or subcontractor in the space provided.

f. Item 5. Dollars In. Report all cost data in thousands of dollars rounded to the nearest tenth, unless otherwise specified in the Request for Proposals (RFP) or contract.

g. Item 6. Hours In. Report all labor-hour data in thousands rounded to the nearest tenth, unless otherwise specified in the RFP or contract. Where contractor data-gathering systems do not supply the data rounded as specified, complete the reporting requirements in the manner in which the data are generated and make a note in the "Remarks" section for Part I (item 28).

h. Items 7a. Customer (Subcontractor Use Only). Item 7a is applicable only if you are a subcontractor submitting the report. If you are a prime or associate contractor, leave this item blank. Otherwise, enter the name of the customer (prime contractor) for whom the work on contract is being performed. Also enter the number of the prime contractor's contract with the Government customer.

i. Items 7b. Subcontractor (Estimated by Reporting Contractor). If the prime contractor is estimating the subcontractor's cost, enter the name and address of the subcontractor. Otherwise, leave this item blank.

j. Item 8. Subcontract No. If you are the prime contractor, enter the subcontract number you have for each subcontract that has CCDR reporting requirements.

k. Item 9. Number of Reporting Subcontractors. If there are any subcontractors with CCDR requirements, enter the number of subcontractors reporting. Otherwise, leave this item blank.

l. Item 10. Type Action. If you are reporting on a contract estimate, check "Contract No." and enter the assigned contract number as well as the number of the latest contract amendment. If you are reporting data in response to an RFP, check "RFP No." and enter the RFP number. To enter a program estimate, check "Program Estimate" and enter the estimate in the space provided.

m. Item 11. Multi-Year Contract. If the contract is funded from a single fiscal year, check "No" and enter the specific fiscal year funding for the contract in the "Remarks" section for Part I (item 28). However, if the report pertains to an incrementally funded Research and Development contract, check "Yes" and enter all the fiscal years covered by the contract in the "Remarks" section for Part I (item 28). In some cases, contractors may be operating under a multi-year contract that provides for annual increments of the quantities procured under the contract. This type of contract is an example of multi-year procurement (MYP). For MYP contracts, check "Yes" and enter the fiscal year of funding covered by the report. If contractually required, a separate report by type of funds and fiscal year on designated reporting elements may be required. MYP contracts are identified by the following characteristics: the Government negotiates the contract for the quantities to be procured in more than one year; contract quantities are budgeted and funded in accordance with the program year for which each quantity is authorized; funds are obligated only for the first year's quantity, with succeeding years' contract quantities funded annually thereafter. In the event funds are not made available to support one or more succeeding year's quantities, the contract shall be canceled. However, contractors are protected from loss by the terms of the contract cancellation-ceiling clause.

Part I, Functional Cost-Hour Report: Complete items in Part I using data extracted from accounting records for the designated cost elements and functional categories defined at the end of this DID. If your accounting system aggregates incurred costs in a manner that does not coincide with those definitions, estimate the costs required for CCDR effort and describe the estimation method in the "Remarks" section (item 28). For example, if overtime and shift premiums for direct labor are charged to overhead, show these costs in item 28 by functional category. Report fringe benefits charged as direct rather than to an overhead account separately and show them in the "Remarks" section (item 28).

a. Item 12. WBS Element Code. Enter the code assigned to the WBS element being reported on.

b. Item 13. Reporting Element. Enter the WBS reporting element specified in the contract or by the DoD Component for which cost data are to be reported. These reporting elements must match those listed in the approved CSDR Plan or provide a mapping scheme that tracks the approved WBS to the newly proposed WBS. The CWIPT shall incorporate all proposed reporting element changes in a revised CSDR Plan for review and approval by the CAIG Chair before changing the contract or other reporting direction. Nevertheless, if there have been changes to the list of reporting elements that are not reflected in the contract or approved CSDR Plan, note these discrepancies in the "Remarks" section (item 28).

c. Item 14. Cost Type. Check the appropriate box to indicate whether the data reported in Part I is for nonrecurring, recurring, or total effort. Nonrecurring costs are those elements of development and investment costs that generally occur only once in the life cycle of a system. Recurring costs are repetitive elements of development and investment costs that may vary with the quantity being produced. Total cost (cost incurred) is the sum of nonrecurring and recurring cost incurred. For more comprehensive definitions of these terms, refer to the Definitions section of the CSDR Manual, DoD 5000.4-M-1. The following guidelines apply to the total contract and to each WBS element selected for reporting as noted in the CSDR Plan.

If either nonrecurring or recurring cost is projected to be more than 5 percent but less than 95 percent of the estimated incurred costs at completion; separate reports for nonrecurring and recurring cost are needed. A third report for total costs for that reporting element is also required. However, if either recurring cost or nonrecurring cost represents 95 percent or more of the costs for each element selected for reporting, mark the "Total" box as well as the "Recurring" or "Nonrecurring" box. The table below shows these reporting requirements for prime contractors.

Application of the reporting requirements in the table may result in different recurring/nonrecurring splits for the total contract and for individual elements selected for reporting. For example, if 96 percent of the total contract is recurring, all costs for total contract reporting would be shown as recurring. However, if an individual WBS element selected for reporting on that same contract is 80 percent recurring and 20 percent nonrecurring, two reports would be required to reflect the split, and a third report would be required for total costs.

Reporting Recurring and Nonrecurring Costs on DD Form 1921-1

If the split is:	The prime submits:	And marks:
95% or more recurring, 5% or less ronrecurring	One report to show total costs	"Recurring" in item 14 and notes in item 28, Remarks, that data reflect total costs
50% recurring, 50% ronrecurring	Two reports, one for recurring and one for nonrecurring	"Recurring" or "Nonrecurring" in item 14 as appropriate
5% or less recurring 95% or more ronrecurring	One report to show total costs	"Nonrecurring" in item 14 and notes in item 28, Remarks, that data reflect total costs

Note: Contractors may report the recurring and nonrecurring breakout regardless of the percentage split.

d. Item 15. Number of Units. Enter for this contract the quantity of equivalent units completed to date and the total number of completed units at contract completion. Equivalent units represent work on fully completed units plus work on partially completed units translated into an equivalent number of totally completed units. Note the methodology used to determine equivalent units in the "Remarks" section (item 28). For Research and Development contracts, enter two quantity amounts for any reported WBS element that includes items to be procured or produced. The first entry is the quantity to be procured and delivered to the Government. The second quantity represents the number of units the contractor will use internally during contract performance e.g., testing. For example, in an

interim CCDR report, assume the actual quantities (equivalent units) produced to date were 5.4 and the number of internal units produced to date was 2.3. In this case, enter 5.4/2.3 in the number of units or quantity field to date for the specific WBS element. Further, assume that at completion of the contract 12 units were to be delivered and 4 systems would be used internally. Then, enter 12/4 in the number of units or quantity field at completion for that same WBS element. Reported quantities must be consistent with the quantities reported in the DD Form 1921. This breakout of equivalent units between Government deliveries and internal contractor use is not required on production contract reporting unless the CWIPT in coordination with the contractor identifies and justifies the need for purposes of estimating costs.

e. Item 16. Appropriation. Check the appropriate box to indicate the type of appropriation, Research, Development, Test and Evaluation (RDT&E) or Procurement, used to fund the contract. If funding other than RDT&E and Procurement is used, leave this item blank and note the specific type of funds in the "Remarks" section (item 28).

f. Reporting Contractor—To Date and At Completion, Columns A and B. The reporting contactor can be the prime contractor, associate contractor, subcontractor, or lower-tier subcontractor who is responsible for preparing and submitting the report. Enter the recurring and nonrecurring costs and hours that have been incurred to date for the reporting contractor. The estimated costs at completion of the contract shall be based on the planned or expected costs to be incurred regardless of contract price, ceiling, or funds available.

g. Subcontract/Outside Production and Services—To Date and At Completion, Columns C and D. Enter the estimated total recurring and nonrecurring costs and hours that may be incurred at completion. The estimated costs at completion of the contract shall be based on the planned or expected costs to be incurred regardless of contract price, ceiling, or funds available.

   The following table illustrates reporting requirements for subcontractor and outside production and services in Part I of DD Form 1921-1. The total of the individual categories to date and at completion must agree with the estimated cumulative price to date and the total contract price at completion.

   Outside Production and Services is a special category of costs on subcontracts for the Airframe reporting element. Prime contractors shall fill out the appropriate data items for subcontractors not reporting separately. Estimate each line item. Distribute all subcontracts for Airframe by function in Outside Production and Services, either among all categories or as purchased equipment.

   Special instructions for the Airframe reporting element within ACAT IC and ID contracts are provided in part 4 of these preparation instructions. All subcontractors for items or services normally produced or performed in airframe plants are to be distributed as appropriate among all functional categories of cost. Include as purchased equipment all subcontracts for items defined as purchased equipment for the Airframe reporting element. Final entries shall be the subcontractor's G&A and profit or fee.

Reporting Requirements in Part I of DD Form 1921-1

Line #	Data	Prime Contractor Data	Subcontractor Data		
			Subcontractors Reporting to the DoD	Nonreporting Subcontractors	Nonreporting Subcontractors (Airframe)
1–5	Engineering Line Items	◆	☐		❖
6	Total Engineering	◆	☐	❖	❖
7–11	Tooling Line Items	◆	☐		❖
12	Total Tooling	◆	☐	❖	❖
13–16	Quality Control Line Items	◆	☐		❖
17	Total Quality Control	◆	☐	❖	❖
18–22	Manufacturing Line Items	◆	☐		❖
23	Total Manufacturing	◆	☐	❖	❖
24–26	Other Costs	◆	☐		❖
27	Total Cost	◆	◆	◆	◆

◆ Actual data included in report.
◆ Actual data included in "Remarks" section of report (item 28).
❖ Estimated data included in report.
☐ Data available to DoD analysts only.
Note: Report data for total contract only.

h. Total—To Date and At Completion Recurring/Nonrecurring, Columns E and F. Enter the total of Columns A and C (To Date) in Column E and the total of Columns B and D (At Completion) in Column F.

i. Data Elements. Lines 1 through 27.

(1) Line 1. Direct Labor Hours (Engineering). Enter direct labor hours related to the Engineering functional category for the reporting element.

(2) Line 2. Direct Labor Dollars (Engineering). Enter direct labor dollars related to the Engineering functional category for the reporting element.

(3) Line 3. Overhead (Engineering). Enter overhead costs related to the Engineering functional category for the reporting element.

(4) Line 4. Material (Engineering). Enter material costs for the reporting element.

(5) Line 5. Other Direct Charges (Engineering). Specify and enter any other direct charges related to the Engineering functional category for the reporting element.

(6) Line 6. Total Engineering Dollars. Enter the sum of Lines 2 through 5.

(7) Line 7. Direct Labor Hours (Tooling). Enter direct labor hours related to the Tooling functional category for the reporting element.

(8) Line 8. Direct Labor Dollars (Tooling). Enter direct labor dollars related to the Tooling functional category for the reporting element.

(9) Line 9. Overhead (Tooling). Enter overhead costs related to the Tooling functional category for the reporting element.

(10) Line 10. Materials and Purchased Tools (Tooling). Enter materials and purchased tools costs related to the Tooling functional category for the reporting element.

(11) Line 11. Other Direct Charges (Tooling). Enter other direct charges related to the Tooling functional category for the reporting element and specify what the charges are for.

(12) Line 12. Total Tooling Dollars. Enter the sum of Lines 8 through 11.

(13) Line 13. Direct Labor Hours (Quality Control). Enter direct labor hours related to the Quality Control functional category for the reporting element.

(14) Line 14. Direct Labor Dollars (Quality Control). Enter direct labor dollars related to the Quality Control functional category for the reporting element.

(15) Line 15. Overhead (Quality Control). Enter overhead costs related to the Quality Control functional category for the reporting element.

(16) Line 16. Other Direct Charges (Quality Control). Specify and enter any other direct charges related to the Quality Control functional category for the reporting element.

(17) Line 17. Total Quality Control Dollars. Enter the sum of Lines 14 through 16.

(18) Line 18. Direct Labor Hours (Manufacturing). Enter direct labor hours related to the Manufacturing functional category for the reporting element.

(19) Line 19. Direct Labor Dollars (Manufacturing). Enter direct labor dollars related to the Manufacturing functional category for the reporting element.

(20) Line 20. Overhead (Manufacturing). Enter overhead costs related to the Manufacturing functional category for the reporting element.

(21) Line 21. Material and Purchased Parts (Manufacturing). Enter material and purchased parts costs related to the Manufacturing functional category for the reporting element.

(22) Line 22. Other Direct Charges (Manufacturing). Specify and enter any other direct charges related to the Manufacturing functional category for the reporting element.

(23) Line 23. Total Manufacturing Dollars. Enter the sum of Lines 19 through 22.

(24) Line 24. Purchased Equipment (Other Costs). Enter purchased equipment costs not assigned to the functional categories (Engineering, Manufacturing, Quality Control, and Tooling).

(25) Line 25. Material Overhead (Other Costs). Enter overhead costs attributable to procured or subcontracted products, including the costs of purchasing, expediting, and storing materials, parts, equipment, and assemblies.

(26) Line 26. Other Costs Not Shown Elsewhere. Specify and enter all direct costs for the reporting element not assigned to the functional categories (Engineering, Manufacturing, Quality Control, and Tooling). Include

undistributed budget, management reserve, and facilities capital cost of money, as appropriate. Provide details for all of these costs in the "Remarks" section (item 28). For all items not segregated by WBS, also enter this element on the total program report.

(27) Line 31. Total Cost (Functional Cost-Hour Summary). Enter the total of all costs, both direct and indirect, plus G&A and profit or fee, for the total contract.

j. Item 28. Remarks. Note any relevant information that could be useful for interpreting the data provided in Part I of this report.

k. Point of Contact (POC) Information. Items 29a through g. Enter the following information for the person to contact for answers to any questions about entries on Part I of DD Form 1921-1: last name, first name, and middle initial (item 29a); department name (29b); telephone number, including area code (29c); e-mail address (29d); fax number, including area code (29e); digital signature (29f); and date signed (29g).

3 *Part II, Progress Curve Report*

a. Item 1. WBS Element Code. Enter the code assigned to the WBS element being reported on.

b. Item 2. Reporting Element. Enter the WBS reporting element specified in the contract or by the DoD Component for which cost data are to be reported. These reporting elements must match those listed in the approved CSDR Plan. The CWIPT shall incorporate all proposed reporting element changes in a revised CSDR Plan for review and approval by the CAIG Chair before changing the contract or other reporting direction. Nevertheless, if there have been changes to the list of reporting elements that are not reflected in the contract or the approved CSDR Plan, note these discrepancies in the "Remarks" section for Part II (item 34).

c. Item 3. Units/Lots Completed. Check the appropriate box to indicate whether the hour and cost data entered on this report are for unit or lot totals or unit or lot averages.

d. Completed Units/Lots. Columns A1 through A4. Report appropriate data for each unit or lot completed even if the DoD contracting component has not yet accepted the item. Include all completed units whether designated as test, operational, or spare. Do not report on items such as spare parts or mock-ups, which represent only partially completed units. Add sequential columns in the form as needed (i.e., A5, A6, etc.).

e. Work-in-Process (WIP). Column B. Enter incurred cost and hour data for all units started but not yet completed during the reporting period.

f. At Completion. Column C. Enter estimates for recurring cost and hour data to complete the work-in-process. For lot data, show the costs and hours estimated to complete the entire lot even if all the units were not started and reported in Column B.

g. Data Elements. Lines 1 through 4.

(1) Line 1. Model and Series. Enter the basic model and series designation in Columns A through C for each test unit, operational unit, or lot being reported. A basic model includes all units whose weight, dimensions, performance characteristics, and manufacturing process are so similar that the Department of Defense considers them to be identical. If a lot includes more than one series of a model, note the number and series designation of each in the "Remarks" section (item 34).

(2) Lines 2 through 4. First Unit of Lot/WIP Units, Last Unit of Lot, and Concurrent Units/Lots. Enter the cumulative number of units completed at the beginning of the reporting period and the number of units completed at the end of the reporting period in Column A2 and A3, respectively. Unless otherwise specified, cumulative units are to be total units of a given model the reporting contractor has accepted since the inception of a program/model, regardless of the number of contracts under which the model has been procured. Enter data for units or lots that are in process during the period in Column B and those to be started later in Column C.

Concurrent units or lots are items being produced within a given lot or in another lot in the same FY buy, respectively, that do not apply to the contract being reported. Included in this category are items for commercial delivery or delivery to the other DoD Components or programs (e.g., Military Assistance Program) on separate contracts. For Column A4, enter the number of concurrent units in each lot that applies to that FY buy. In a production situation when the relevant costs cannot be isolated, use the unit average costs for all units in the lot, regardless of whether they are delivered under the contract being reported or are concurrent units.

When reporting on a unit, enter the cumulative number of each unit completed during the period in Line 2. Unless otherwise specified, cumulative units are to be total units of a given model the reporting contractor has completed since the inception of a program/model, regardless of the number of contracts under which the model has been procured.

Where unit- or lot-accounting systems are not available, equivalent units may be used as the basis for reporting in Line 2. This method may be followed if, in the judgment of the procuring contracting officer, workstation standards are of such quality that standard equivalent units may be reasonably accurate and provide a consistent measure of acceptable work. If you use this equivalent units method, lots shall include the standard equivalent units of production for time periods no greater than one month. Include explanations in the "Remarks" section (item 34).

h. Characteristics. Lines 5a through 5c. The contractor reports the specific characteristics (e.g., weight, range, and speed) based on the approved CSDR Plan. The CWIPT is responsible for identifying the characteristics proposed for reporting in the CSDR Plan that is forwarded to the CAIG for approval. Airframe unit weight is a mandatory requirement for aircraft contracts. In Columns A, B,

and C, enter the unit or average lot characteristics for units produced under the contract. Distinguish "make weight" between prime contractors and subcontractors, if applicable. If additional space is required, use the "Remarks" section (item 34). See the special instructions on the Airframe reporting element (part 4 of these preparation instructions) for instructions on entering Airframe weight.

i. Prime Contractor. Lines 6 through 14. Enter for each unit or lot the contractor's direct labor hours and dollars per unit (or average per lot) for Quality Control and Manufacturing Labor, Raw Materials and Purchased Parts, and Purchased Equipment as shown below. Complete the reporting requirements using data extracted from existing accounting records. If your records do not provide actual figures, give an estimate and indicate the basis for the estimate in the "Remarks" section (item 34). Also, when reporting hours and costs incurred to date, leave fields blank if none have actually been incurred.

   (1) Line 6. Direct Quality Control Labor Hours. Enter direct labor hours related to the Quality Control functional category for each unit or lot.

   (2) Line 7. Direct Manufacturing Labor Hours. Enter direct labor hours related to the Manufacturing functional category for each unit or lot.

   (3) Line 8. Total Direct Labor Hours. Enter the sum of lines 6 and 7.

   (4) Line 9. Direct Quality Control Labor Dollars. Enter direct labor dollars per unit (or average per lot) related to the Quality Control functional category.

   (5) Line 10. Direct Manufacturing Labor Dollars. Enter direct labor dollars per unit (or average per lot) related to the Manufacturing functional category.

   (6) Line 11. Total Direct Labor Dollars. Enter the sum of lines 9 and 10.

   (7) Line 12. Raw Material and Purchased Parts. Enter material and purchased parts costs per unit (or average per lot) related to the Manufacturing functional category.

   (8) Line 13. Purchased Equipment. Enter purchased equipment costs per unit (or average per lot).

   (9) Line 14. Total Direct Dollars. Enter the sum of Lines 11, 12, and 13.

j. Subcontract/Outside Production and Services. Lines 15 through 23. The following table illustrates reporting requirements for subcontractor and outside production and services in Part II of DD Form 1921-1. The total of the individual categories to date and at completion must agree with the estimated cumulative price to date and the total contract price at completion.

Reporting Requirements in Part II of DD Form 1921-1

Line #	Data	Prime Contractor Data	Subcontractor Data	
			Subcontractors Reporting to the DoD	Nonreporting Subcontractors
9	Direct Quality Control Labor Dollars	◆		
10	Direct Manufacturing Labor Dollars	◆		

12	Raw Materials and Purchased Parts	◆		
13	Purchased Equipment	◆		
14	Total Direct Dollars	◆		
16	Direct Manufacturing Labor Hours		☐	❖
18	Direct Quality Control Labor Dollars		☐	❖
19	Direct Manufacturing Labor Dollars		☐	❖
21	Raw Materials and Purchased Parts		☐	❖
22	Purchased Equipment		☐	❖
23	Total Direct Dollars		◆	◆

◆ Actual data included in report.
❖ Estimated data included in report.
☐ Data available to DoD analysts only.

Outside Production and Services is a special category of costs on subcontracts for the Airframe reporting element. See the special instructions on Airframe reporting element in part 4 of these preparation instructions.

(1) Line 15. Direct Quality Control Labor Hours. Enter direct labor hours related to the Quality Control functional category for each unit or lot.

(2) Line 16. Direct Manufacturing Labor Hours. Enter direct labor hours related to the Manufacturing functional category for each unit or lot.

(3) Line 17. Total Direct Labor Hours. Enter the sum of lines 15 and 16.

(4) Line 18. Direct Quality Control Labor Dollars. Enter direct labor dollars per unit (or average per lot) related to the Quality Control functional category.

(5) Line 19. Direct Manufacturing Labor Dollars. Enter direct labor dollars per unit (or average per lot) related to the Manufacturing functional category.

(6) Line 20. Total Direct Labor Dollars. Enter the sum of lines 18 and 19.

(7) Line 21. Raw Materials and Purchased Parts. Enter material and purchased parts costs per unit (or average per lot) related to the Manufacturing functional category.

(8) Line 22. Purchased Equipment. Enter purchased equipment costs per unit (or average per lot).

(9) Line 23. Total Direct Dollars. Enter the sum of Lines 20, 21, and 22.

k. Total per Unit/Lot. Lines 24 through 33.

(1) Line 24. Direct Quality Control Labor Hours. Enter the sum of lines 6 and 15.

(2) Line 25. Direct Manufacturing Labor Hours. Enter the sum of lines 7 and 16.

(3) Line 26. Total Direct Labor Hours. Enter the sum of lines 8 and 17.

(4) Line 27. Direct Quality Control Labor Dollars. Enter the sum of lines 9 and 18.

(5) Line 28. Direct Manufacturing Labor Dollars. Enter the sum of lines 10 and 19.

(6) Line 29. Total Direct Labor Dollars. Enter the sum of lines 11 and 20.

(7) Line 30. Raw Materials and Purchased Parts. Enter the sum of lines 12 and 21.

(8) Line 31 Purchased Equipment. Enter the sum of lines 13 and 22.

(9) Line 32. Total Direct Dollars. Enter the sum of lines 29, 30, and 31.

(10) Line 33. % Subcontract or Outside Production and Services. For subcontracted work, enter the percentage of subcontracted cost to total cost per unit, excluding the Airframe reporting element. For outside production and services involving the Airframe reporting element, enter the percentage of outside production and service hours to total hours per unit.

l. Item 34. Remarks. Note any relevant information that could be uesful in interpreting the data provided in Part II of this report.

m. Items 35a through g. Point of Contact (POC) Information. Enter the following information for the person to contact for answers to any questions about entries on Part II of DD Form 1921-1: last name, first name, and middle initial (item 35a);, department name (35b); telephone number, including area code (35c); e-mail address (35d); fax number, including area code (35e); digital signature (35f); and date signed (35g).

4. *Special Instructions for the Airframe Reporting Element.* The purpose of these instructions is to achieve comparability of airframe costs, both aircraft and missiles, among contractors who prepare DD form 1921-1, "Functional Cost-Hour and Progress Curve Report." These instructions apply to all ACAT programs that report airframe costs. The Airframe reporting element is used to describe the collection of certain structural assemblies, equipment, and functional costs as defined in MIL-HDBK-881 and expanded upon here.

a. Categories of Cost. For cost consistency purposes, airframe costs are divided into Airframe Manufactured Equipment and Airframe Purchased Equipment. The primary distinction between these categories lies in where the airframe components are typically made. Components normally fabricated and assembled by airframe plants are considered Airframe Manufactured Equipment, and components normally procured from non-airframe plants are identified as Airframe Purchased Equipment. A detailed description of each follows.

(1) Airframe Manufactured Equipment. This category of airframe costs includes labor (Engineering, Tooling, Quality Control, Manufacturing), tools, test equipment, raw materials, and purchased parts required to design, fabricate, and assemble the airframe plus the installation and checkout of all the air vehicle equipment. This category also includes installation parts, wiring, tubing, and so on, for installing all equipment (known as Group A equipment), all actuating hydraulic cylinders, primary landing gear components such as struts, shock absorbers, axles and launch bars (brakes, wheels, tires, hydraulic lines, and actuators should be included in Purchased Equipment), radomes, canopies, ducts, seats (except ejection mechanism) for passenger and crew, and food preparation equipment such as galleys, stoves, refrigeration units, and fixed external tanks.

Report all Airframe Manufactured Equipment items on DD Form 1921-1 using the functional categories of Engineering, Tooling, Manufacturing, and Quality Control in Part I, Functional Cost-Hour Report, within either the

Reporting Contractor or Subcontract or Outside Production and Services sections. Report Airframe Manufactured Equipment items using the functional categories of Quality Control and Manufacturing in Part II, Progress Curve Report. If any major portion of Airframe Manufactured Equipment is subcontracted, report it under the Subcontract or Outside Production and Services section at the same level of indenture as the prime manufacturer's costs and hours.

While make-or-buy decisions often change throughout the performance of a contract, always use the appropriate functional categories to show components identified as Airframe Manufactured Equipment, whether the contractor makes or buys the items.

(2) Airframe Purchased Equipment. This category consists of components normally procured from non-airframe plants, including landing gear (wheels brakes, tires, floats, skids, and skis), environmental control equipment, air conditioning equipment, multipurpose hydraulic and pneumatic pumps, power conversion equipment, instrumentation/navigation equipment, fire detection/extinguishing equipment, flight control instrumentation, heat exchangers, electrical actuators, compressors, pressure control equipment, pressure storage vessels, multipurpose power supplies, guns/gun turrets, starters, propellers, cameras, and trapped fuel.

While make-or-buy decisions often change throughout the performance of a contract, always show components identified as Airframe Purchased Equipment under either the Reporting Contractor section or the Subcontract or Outside Production and Services section, regardless of whether the particular contractor makes or buys the items.

Report the price paid to vendors for purchased equipment. If the prime contractor makes the equipment in house, the cost should still be reported in the Airframe Purchased Equipment category.

b. Subcontracts and Outside Production and Services. Prime contractors shall fill out the appropriate data items in Lines 17 through 25 in Part II for subcontractors not reporting separately. Estimate each line item. Distribute all subcontracts for Airframe by function in Outside Production and Services, either among all categories or as purchased equipment.

The following additional guidelines apply for the Airframe reporting element within ACAT IC and ID program contracts. All subcontractors for items or services normally produced or performed in airframe plants are to be distributed as appropriate among all functional categories of cost. Include as purchased equipment all subcontracts for items defined as purchased equipment for reporting element Airframe.

c. Relationship of Airframe and Selected WBS Elements. Explained below are the cost relationships between the airframe and the WBS elements of Systems Test and Evaluation, Systems Engineering, and Data.

(1) Systems Test and Evaluation. Report all tests for the airframe or interfaces between the airframe and installed mission-oriented equipment as airframe recurring costs if the tests will continue in production. All development tests performed by the airframe manufacturer for the airframe and its interfaces with the avionics equipment should fall within the specific test program called out under Systems Test and Evaluation (e.g., static, fatigue, flight tests, etc.) or Other Systems Test and Evaluation. Include instrumentation for the engineering and manufacturing development test program in Flight Test under System Test and Evaluation.

(2) Systems Engineering. Systems Engineering should be limited to engineering for the interfaces of the total weapon system with the external environment (e.g., support equipment, test facilities, etc.). Include engineering of all internal interfaces such as avionics to airframe and engines to airframe in Airframe as nonrecurring. Also include all tradeoffs, design, and so on, for the air vehicle in Airframe as nonrecurring.

(3) Data. Include in the Data category only costs that will not be incurred if the data are eliminated from DD Form 1423, "Contract Data Requirements List."

d. Airframe Weight Reporting. Enter Airframe unit weight (AUW) in Line 5 of Part II, Progress Curve Report. AUW, as shown in the Defense Contractors' Planning Reports and Aeronautical Manufacturers' Reports, was developed to isolate the portion of the empty weight normally produced in an aircraft manufacturer's facility. In order to use aircraft weight statements in conjunction with CCDRs, the portions of cost not associated with the AUW must be discretely identifiable. This information can be used to develop meaningful cost and weight relationships only when the equipment included in the AUW is directly related to the airframe manufacturer's cost.

AUW is the empty weight minus the weight of specific items not included in AUW, regardless of their method of acquisition. Empty weight is the combined weight of the airframe's manufactured structure, purchased equipment, propulsion, and avionics.

For airplanes, empty weight is configured in the airplane detail specification. The following table shows the items not included in AUW (items 6 through 15 and 17 through 21) for airplanes. If more than one configuration exists (as may occur in cargo/personnel transports due to cargo configuration versus personnel seat arrangements), two different empty weights may result. In that case, furnish data for both configurations.

Items in Airplane Empty Weight and AUW

	Item	Empty Weight	Airframe Unit Weight
1	Fuselage	X	X
2	Wing	X	X
3	Empennage	X	X
4	Primary Landing Gear	X	X
5	Nacelle	X	X
6	Propellers	X	
7	Engines (Main and Auxiliary)	X	
8	Rubber or Nylon Fuel Cells	X	
9	Starters (Main and Auxiliary)	X	
10	Batteries and Electrical Power Supply	X	
11	Auxiliary Power Plant Unit	X	
12	Instruments	X	
13	Air Conditioning Unit	X	
14	Anti-Icing	X	
15	Avionics Hardware (Group B)	X	
16	Avionics Install (Group A)	X	X
17	Camera and Optical Viewfinders	X	
18	Turrets and Power Operated Mounts	X	
19	Wheels	X	
20	Brakes	X	
21	Tires and Tubes	X	

For missiles and space launch vehicles, empty weight is configured in the missile and space launch vehicles detail specification. The following table shows the items not included in AUW (items 4, 6, 7, 8, 10, and 12 in the table) for missiles and space launch vehicles.

Items in Missiles and Launch Vehicles Empty Weight and AUW

	Item	Empty Weight	Airframe Unit Weight
1	Aerodynamic Surface	X	X
2	Body	X	X
3	Takeoff and Recovery	X	X
4	Propulsion	X	
5	Power Generator	X	X
6	Orientation	X	
7	Guidance	X	
8	Electronics	X	
9	Environmental Protection	X	X
10	Armament	X	
11	Separation System	X	X
12	Destruct System	X	
13	Emergency Equipment	X	X
14	Visual Identification	X	X

e. Outside Production and Services. For the Airframe reporting element, Outside Production and Services is a special category of subcontracts the prime contractor

must fill out for all subcontracts not reporting separately to the Department of Defense. Distribute all subcontracts for Airframe by function as Outside Production and Services, either among all categories or as purchased equipment. The following guidelines apply (even when make-or-buy decisions change during contract execution): all subcontracts for items or services normally produced or performed in airframe plants must be distributed as appropriate among all functional categories of cost whether the particular contractor makes or buys the items; all subcontracts for items that fall within the definition of Purchased Equipment must be included as purchased equipment whether the particular contractors make or buy the items; final entries shall be the subcontractor's G&A and profit or fee.

Definitions:

1. *Functions*

    a. Manufacturing. The Manufacturing functional category includes the effort and costs expended in the fabrication, assembly, and functional testing of a product or end item. It involves all the processes necessary to convert a raw material into finished items. Note that test activities that routinely continue during production should be recorded as recurring.

    b. Quality Control. The Quality Control functional category includes activities that check, physically inspect, measure, and test the product. Quality control efforts typically focus on manufacturing, shops, receiving and shipping, and records that are necessary to assure that hardware, end items, parts, components, processes, and tests are being fabricated, assembled, and tested in accordance with engineering drawings and specifications.

2. *Performing Contractor*

    a. Contractor. The contractor is the party performing the task or service or providing the equipment, hardware, facility, or end item specified in a contract for delivery to a customer or buyer, generally the Department of Defense.

    b. Subcontract. A subcontract is any agreement, purchase order, or instrument other than a prime contract calling for work or for the material required for the performance of one or more prime contracts. It usually covers procurement of major components or subsystems that require the subcontractor to do extensive design, development, engineering, and testing to meet a prime contractor's procurement specifications. A company that has a subcontract without CCDR reporting requirements with a company whose prime contract contains CCDR reporting requirements is referred to as a nonreporting subcontractor.

3. *Cost Categories*

    a. Direct Labor Dollars (All Functions). Direct labor dollars are those dollars that can be specifically and consistently identified or assigned to a particular cost objective (e.g., work order).

b. Direct Labor Hours (All Functions). Direct labor hours are those hours that can be specifically and consistently identified or assigned to a particular cost objective (e.g., a work order).

c. Purchased Equipment. Manufactured and assembled items the contractor procures from outside sources that are required for installation in the reporting element. Such equipment normally costs over $1,000 per unit and exhibits a wide range of complexity. Examples of purchased equipment for large weapon systems are multipurpose hydraulic and pneumatic pumps, motors, generators, air conditioning equipment, batteries, landing gear, instruments, pedestals, and so on. Where the reporting contractor specifically controls the design of such equipment for the unique requirements of the WBS element, purchased equipment is subcontracted and reported. Subcontracts for items falling within the definition of Purchased Equipment must be included as purchased equipment whether the particular contractor makes or buys the items.

d. Raw Materials and Purchased Parts. Raw Materials and Purchased Parts within the Manufacturing functional category include the costs of raw and semi-fabricated material plus purchased parts used in the manufacture of the specified reporting element. The purchased parts are essentially off-the-shelf items that are widely used in industry and supplied by a specialized manufacturer who has the proprietary right to the product. The following are examples of materials and purchased parts: raw materials in typically purchased forms and shapes (sheets, bars, rods, etc.); semi-fabricated materials in typically purchased forms and shapes (wires, cables, fabrics, conduits, tubing, sealing strips, fiberglass, windshield glass, etc.); raw castings and forgings; manufactured proprietary clips, fasteners, hose clamps and assemblies, and seat belts; standard and proprietary valves, cocks, and hydraulic and plumbing fittings and fixtures; and standard electrical fittings (conforming to underwriters and other standard specifications). Purchased parts are distinguished from purchased equipment by cost and complexity.

End of DI-FNCL-81566A

DATA ITEM DESCRIPTION

Title: Contract Work Breakdown Structure

Number: DI-MGMT-81334A **Approval Date:** 20031031

AMSC Number: D7515 **Limitation:**

DTIC Applicable: **GIDEP Applicable:**

Office of Primary Responsibility: (D) OSD/PA&E/CAIG **Applicable Forms:** Not Applicable; 35 hours

Use/relationship: This documents the Contract Work Breakdown Structure (CWBS) and its extension by the contractor using terminology and definitions, as applicable, in MIL-HDBK-881. The complete Program Work Breakdown Structure (PWBS) will serve as a basis for program and technical planning, scheduling, cost estimating, resource allocations, performance management where appropriate, configuration management, and status reporting.

This DID summarizes the format for the WBS and provides preparation instructions to support the specific data and frequency requirements specified in the contract. This DID is applicable to all contracts that require a WBS and is related to the two Contractor Cost Data Reporting (CCDR) forms: DD Form 1921, "Cost Data Summary Report" (DID number DI-FNCL-81565A), and DD Form 1921-1, "Functional Cost-Hour and Progress Curve Report" (DID number DI-FNCL-81566A). This DID can also be related to DD Forms 2734/1, 2734/2, 2734/3, 2734/4, and 2734/5, "Cost Performance Report" (DID number DI-MGMT-81466); DD Form 2735, "Cost/Schedule Status Report, (DID number DI-MGMT-81467); and DD Form 1586, "Contract Funds Status Report" (DID number DI-MGMT-81468).

Routine reporting shall be at CWBS level 3 for prime contractors and key subcontractors. *MIL-HDBK-881 serves as the basis for identifying the first three levels of the PWBS and for developing the CWBS.* Extensions of the PWBS and CWBS can be tailored to the specific program but will be consistent with MIL-HDBK-881. Detailed reporting of the CWBS (i.e., below level 3) shall be required only for those lower-level elements that address high-risk, high-value, or high-technical-interest areas of a program. Identifying these additional elements is a critical early assignment for the Cost Working Level Integrated Product Team (CWIPT) for inclusion in the PWBS. The final CWBS must agree with the contract Cost and Software Data Reporting (CSDR) Plan approved by the OSD Cost Analysis Improvement Group (CAIG) Chair.

The reporting contractor shall prepare and submit the contract dictionary within 60 days of contract award. The reporting contractor shall maintain and update the WBS Dictionary throughout the life of the contract. The dictionary shall not be submitted more frequently than report submissions.

This DID replaces DID number DI-MGMT-81334.

Requirements:

1. *Reference documents.* Detailed instructions for preparing the CWBS can be found in MIL-HDBK-881. WBS guidance is also contained in Chapter 2 of the CSDR Manual, DoD 5000.4-M-1.
2. *Formats.* The CWBS shall be reflected in an electronic report that consists of two parts as shown in the sample attachments. The first part is for the CWBS Index and the second is for the CWBS Dictionary. The index lists the individual elements. The CWBS dictionary describes the effort and tasks associated with every CWBS element shown in the CWBS Index.

Preparation Instructions:

1. *Contract Work Breakdown Structure Index:*
    a. CWBS Code. Enter the code, if applicable.
    b. CWBS Element Level. Enter the level of the CWBS element. Level 1 is the total contract. Levels 2, 3, etc., are successively lower levels of the program.
    c. CWBS Element Name. Enter the title of the CWBS element using the specific name or nomenclature.
    d. Contract Line Item(s). Enter the numbers of the contract line items associated with the CWBS element, if applicable.
2. *Contract Work Breakdown Structure Dictionary:*
    a. CWBS Code.
    b. CWBS Element. Enter the title of each CWBS element in the same order as given in Part I.
    c. CWBS Definition. Enter a complete description of the technical and cost content of each CWBS element. The statement should be as descriptive as possible about the efforts, tasks, tests, components, etc., that are to be included in the CWBS element by the contractor. The CWBS Dictionary must be updated and maintained throughout the life of the contract. However, the updated dictionary shall be submitted no more frequently than the CCDR report submissions.

CONTRACT WORK BREAKDOWN STRUCTURE INDEX	PROGRAM: Missile X LRIP Surface-to-Air Interceptor	REP NO: XXXXXX CONTRACT NO: XXXXXX-98-C-XXX	CONTRACT PLAN NO: XXXXXXXX	DATE: 06/30/02

CWBS CODE	CWBS ELEMENT LEVEL 1	2	3	4	5	NAME	CONTRACT LINE ITEM(S)
1.0	✓					Missile System	
1.1		✓				Air Vehicle	
1.1.1			✓			Propulsion	
1.1.2			✓			Airframe	
1.1.3			✓			Warhead	
1.1.4			✓			Post Boost System	
1.1.5			✓			Guidance And Control Equipment	
1.1.5.1				✓		Guidance Section	
1.1.5.1.1					✓	Seeker	
1.1.5.1.2					✓	Guidance Electronics	
1.1.5.2				✓		Control Devices	
1.1.5.3				✓		Structure	
1.1.5.4				✓		Power and Networks	
1.1.6			✓			Ordnance Initiation Set	
1.1.7			✓			Airborne Test Equipment	
1.1.8			✓			Airborne Training Equipment	
1.1.9			✓			Auxiliary Equipment	
1.1.10			✓			Integration, Assembly, Test, and Checkout (IAT&C)	
1.2		✓				All Up Round (AUR) IAT&C	
1.3		✓				Systems Engineering/Program Management	
1.4		✓				Systems Test and Evaluation	

CONTRACT WORK BREAKDOWN STRUCTURE DICTIONARY	PROGRAM: Missile X LRIP Surface-to-Air Interceptor	RFP NO: _____ CONTRACT NO: XXXXX-98-C-XXXX	DATE: 11/1/00

CWBS CODE	CWBS ELEMENT	CWBS DEFINITION
1.0	Missile System	The missile is a cylindrical body with four fixed fins attached to the aft end of the Solid Rocket Motor case. The control surfaces are located behind the fixed fins. The missile angular orientation is zero degrees at top center, with increasing angles positive in a clockwise direction (standing at the aft end looking forward). The outside surface of the missile body is coated for thermal protection of the structure from aerodynamic heating and rain erosion. Electrical interface between the launcher and the missile is provided by an umbilical cable connecting the missile Aft-Section to the Aft-Section of the Canister.
1.1	Air Vehicle	This element refers to the means for delivering the destructive effect to the target, including the capability to generate or receive intelligence to navigate and penetrate to the target area and to detonate the warhead. This element includes the design, development, and production of complete units (prototype and operationally configured units, which satisfy the requirement of their applicable specifications(s)) regardless of their use.
1.1.1	Propulsion	The propulsion system consists of the booster and the interstage. A single-stage, solid propellant rocket motor provides all of the boost impulse for the missile. The deployable flares and aft rate gyro package (RGP) are positioned at the aft end of the booster in the BUG configuration.
1.1.2	Airframe	This element refers to the structural framework that provides the aerodynamic shape, mounting surfaces and environmental protection for the missile components. It includes the wings, fins, and structural body assemblies.
1.1.3	Warhead	Warhead includes the assembly containing the kill mechanism of the round and its associated high explosives, chemicals, biological agents, nuclear devices, and pyrotechnics.
1.1.4	Post Boost System	This element provides the roll rate control and the final velocity to adjust and deploy the payload as well as the external protection material, velocity control system, and deployment group.
1.1.5	Guidance and Control Equipment	This element refers to the missile's ability to acquire and track targets, receive guidance data from various sensors and execute the necessary flight path to intercept the target.
1.1.5.1	Guidance Section	This element refers to the missile's ability to receive guidance data from various sensors.
1.1.5.1.1	Seeker	The seeker assembly is attached to the kill vehicle via the forward ring of the forecone. The assembly consists of four elements; a seeker basecone, an IR sensor, a gimbal set, and a Seeker Electronics Assembly (SEA). The seeker basecone is a conical assembly cast from magnesium. It is used as the main structure to mount the IR sensor and gimbals to the KV, and to dampen structural resonances.
1.1.5.1.2	Guidance Electronics	This element includes all the electronic components and their structural items needed to perform all the seeker tracking functions.
1.1.5.2	Control Devices	This element includes all the electronic components and support structure needed to perform the electronic processing done outside, but near the detector assembly. This may include detector biasing electronics, preamplification, gain control processing, A/D conversion and multiplexing of the detector outputs when many detector outputs are present.
1.1.5.3	Structure	This element refers to the metal or composite materials that provide external housing, bulkheads, attach points and connectors for guidance and control equipment.
1.1.5.4	Power and Networks	This element refers to the subsystem that starts the missile and maintains electrical power prior to launch, upon release from the launch platform, and during flight. Additionally, it consists of power supply devices and power converters.
1.1.6	Ordnance Initiation Set	The ordnance initiation set initiates all ordnance events throughout the missile and ground system (except reentry system components). Upon receipt of an electrical signal from the missile guidance and control system, the ordnance initiation set firing units convert the signal into ordnance outputs to the detonating cords. Among these ordnance events are stage separation, motor ignition, gas generator ignition, shroud separation, etc. Includes through bulkhead initiators, ordnance test harnesses, and firing units/exploding bridge wires.
1.1.7	Airborne Test Equipment	The airborne test equipment element refers to an exercise warhead that is interchangeable with the live warhead and suitable for developmental firing. This element includes destruct systems, recovery systems, special instrumentation, and telemetry equipment.
1.1.8	Airborne Training Equipment	The airborne training equipment element refers to an exercise warhead that is interchangeable with the live warhead and suitable for training firing. This element includes destruct systems, recovery systems, special instrumentation, and telemetry equipment associated with the training mission.
1.1.9	Auxiliary Equipment	The auxiliary equipment element refers to that additional equipment generally excluded from other specific elements. This element includes the environmental control, safety and protective subsystems, and destruct system. It also includes equipment of a single purpose and function that is necessary for accomplishing the assigned mission.
1.1.10	Integration, Assembly, Test and Checkout	The IAT&CO of the hardware will be conducted at the contractor's assembly facility. Subsystem components will be assembled and tested, then shipped to company YYYY for final assembly and testing.

CONTRACT WORK BREAKDOWN STRUCTURE DICTIONARY	PROGRAM: Missile X LRIP Surface-to-Air Interceptor	RFP NO: _____ CONTRACT NO: XXXXXX-98-C-XXXX	DATE: 11/1/00

CWBS CODE	CWBS ELEMENT	CWBS DEFINITION
1.2	Integration, Assembly, Test, and Checkout	The IAT&CO of the missile will be conducted at a Company YYYY assembly facility. For flight vehicles, the guidance and control unit is tested and installed, the units are fueled, and the ordinance is installed. The missile is then installed in the canister and shipped to the testing range.
1.3	Systems Engineering/Program Management	The system engineering and technical control as well as the business management of the project. System Engineering/Project Management effort that can be associated specifically with the hardware element is excluded, unless this management effort is of special contractual or engineering significance (e.g., associated contractor).
1.4	Systems Test and Evaluation	Four prototypes of the missile will be tested at WWWW testing range over a period of 3 months. The testing facility will evaluate both missile performance and accuracy, along with the launching platform capabilities.

End of DI-MGMT-81334A

AP2. APPENDIX 2
SRDR DD FORMS, DATA ITEM DESCRIPTIONS, AND PREPARATION INSTRUCTIONS

AP2.1. INTRODUCTION

This appendix contains examples of the following DD Forms and Data Item Descriptions (DIDs):

AP2.1.1. DD Form 2630-1, “Software Resources Data Report: Initial Government Report” (Figure AP2.F16);

AP2.1.2. DD Form 2630-2, “Software Resources Data Report: Initial Developer Report” (Figure AP2.F17), followed by its associated DID, XXXXX; and

AP2.1.3. DD Form 2630-3, “Software Resources Data Report: Final Developer Report” (Figure AP2.F18), followed by its associated DID, XXXXX.

A2.2. CUSTOMIZING FORMS

AP2.2.1. This appendix explains the content of the DD Form 2630 series by describing each data item contained in figures that serve as examples of the three forms. DD Forms 2630-1, -2, and -3 each contain two pages. In each case, page 1 contains Parts I, II, and III, and page 2 contains Parts IV and V and an area for Point of Contact (POC) information. Space for comments, explanations, or context information is provided at the end each part. More extensive comments should be documented as part of the associated Data Dictionary.

AP2.2.2. Reported data items must be customized, first, to be consistent with the data the development organization maintains to manage a project and, second, to be in accordance with the approved Software Resources Data Collection Plan developed by the Cost Working-Level Integrated Process Team (CWIPT).

AP2.2.3. Section AP2.4 of this appendix contains instructions that indicate the level of detail needed to explain any customized or added data items. Other than deferring to the CWIPT, these instructions do not specify a process for customizing, completing, or submitting the DD Form 2630 series. The instructions may be used as a point of departure for a customized SRDR Data Dictionary.

A2.3. OBTAINING UPDATES TO FORMS AND DIDS

The forms and DIDs in this appendix were current when the Manual was issued; however, any of them can be changed and approved for release without changing the Manual. The most updated versions of the forms and DIDs are available from the DCARC Web site (http://dcarc.pae.osd.mil).

Figure AP2.F16. Example of DD Form 2630-1, "Software Resources Data Report: Initial Government Report" (Page 1)

SECURITY CLASSIFICATION

SOFTWARE RESOURCES DATA REPORT: INITIAL GOVERNMENT REPORT

Form Approved OMB No. XXXX-XXXX

Due 180 days before contract award as part of the Cost Analysis Requirements Description (CARD).

The public reporting burden for this collection of information is estimated to average 25 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (XXXX-XXXX), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.

PART I. REPORT CONTEXT AND DEVELOPMENT ORGANIZATION

1. SYSTEM/ELEMENT NAME *(Version/Release)*			2. REPORT AS OF *(MM/DD/YY)*
3. AUTHORIZING VEHICLE *(MOU, Contract/Amendment, Etc.)*			4a. REPORTING EVENT 4b. SUBMISSION # *(Supersedes #* *if applicable)*
5. DEVELOPMENT ORGANIZATION Not aplicable to DD Form 2630-1	6a. CERTIFIED CMM LEVEL OR EQUIVALEN Not aplicable to DD Form 2630-1	7a. LEAD EVALUATOR Not aplicable to DD Form 2630-1	
	6b. CERTIFICATION DATE Not aplicable to DD Form 2630-1	7b. EVALUATOR AFFILIATION Not aplicable to DD Form 2630-1	
8. PRECEDENTS *(List up to five similar systems by the same organization or team)* Not aplicable to DD Form 2630-1			
9. APPLICABLE SOFTWARE RESOURCES DATA REPORT DATA DICTIONARY FILENAME Not aplicable to DD Form 2630-1			10. LAST REVISION DATE Not aplicable to DD Form 2630-1
11. COMMENTS ON PART I RESPONSES Not aplicable to DD Form 2630-1			

PART II. PRODUCT AND DEVELOPMENT DESCRIPTION

	PERCENT OF PRODUCT SIZE A	PLANNED OR ACTUAL DEVELOPMENT PROCESS B	UPGRADE OR NEW? C
12. PRIMARY APPLICATION TYPE:	%	Not aplicable to DD Form 2630-1	
13. SECOND APPLICATION TYPE:	%		
14. THIRD APPLICATION TYPE:	%		
15. FOURTH APPLICATION TYPE:	%		
16. PRIMARY LANGUAGE USED:	%		
17. SECONDARY LANGUAGE USED:	%		
18. COTS/GOTS APPLICATIONS USED:			
19. PEAK STAFF *(Maximum Team Size in FTE)*			
20. PERSONNEL EXPERIENCE IN DOMAIN HIGHLY EXPERIENCED: % NOMINALLY EXPERIENCED: % INEXPERIENCED/ENTRY LEVEL: %			
21. COMMENTS ON PART II RESPONSES			

PART III. PRODUCT SIZE REPORTING

	ESTIMATE D
22. NUMBER OF SOFTWARE REQUIREMENTS *(not including External Interface Requirements unless noted in associated Data Dictionary)*	
23. NUMBER OF EXTERNAL INTERFACE REQUIREMENTS *(i.e., Not Under Project Control)*	
24. AMOUNT OF REQUIREMENTS VOLATILITY ENCOUNTERED *(on a scale of 1 to 5, where 1 = Very Low and 5 = Very High)*	Not applicable
25. AMOUNT OF DELIVERED CODE DEVELOPED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
26. AMOUNT OF DELIVERED CODE MODIFIED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
27. AMOUNT OF DELIVERED CODE REUSED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
28. COMMENTS ON PART III RESPONSES:	

DD Form 2630-1, Aug 2003

SECURITY CLASSIFICATION

Figure AP2.F16. Example of DD Form 2630-1, "Software Resources Data Report: Initial Government Report" (Page 2)

SECURITY CLASSIFICATION

SOFTWARE RESOURCES DATA REPORT: INITIAL GOVERNMENT REPORT			
PART IV. RESOURCE AND SCHEDULE REPORTING			
With the month of contract award as month 1, enter the actual or estimated start month, end month, and total labor hours for each activity shown. Together, Items 29 through 35 should account for all direct hours charged to the software development project. Use Item 35 to report any direct hours not accounted for in Items 29 through 34. Explain any contribution of indirect hours in the associated Data Dictionary.	ACTUAL OR ESTIMATED DEVELOPMENT PROCESS		
	START MONTH E	END MONTH F	TOTAL HOURS G
29. SOFTWARE REQUIREMENTS ANALYSIS			
30. SOFTWARE ARCHITECTURE AND DETAILED DESIGN			
31. SOFTWARE CODING AND UNIT TESTING			
32. SOFTWARE INTEGRATION AND SYSTEM/SOFTWARE INTEGRATION			
33. SOFTWARE QUALIFICATION TESTING			
34. SOFTWARE DEVELOPMENTAL TEST AND EVALUATION			
35. ALL OTHER DIRECT SOFTWARE ENGINEERING DEVELOPMENT EFFORT DESCRIBE:			
36. COMMENTS ON PART IV RESPONSES			
PART V. PRODUCT QUALITY REPORTING (OPTIONAL)			
37a. REQUIRED OR ACTUAL MEAN TIME TO SERIOUS OR CRITICAL DEFECT (MTTD) AT DELIVERY IN HOURS *(Provide the specific definition of this measure in the associated Data Dictionary.)*			
37b. OBSERVED OR COMPUTED RELIABILITY COMPARED WITH NOMINAL RELIABILITY OF ANALOGOUS SYSTEMS *(Provide details about the analogous systems and define nominal reliability in the associated Data Dictionary.)*			
38. COMMENTS ON PART V RESPONSES			
POINT OF CONTACT (POC) INFORMATION			
39a. NAME *(Last, First, Middle Initial)*	39b. DEPARTMENT	39c. TELEPHONE NO. *(Include Area Code)*	
39d. E-MAIL ADDRESS	39e. FAX NO. *(Include Area Code)*	39f. SIGNATURE	39g. DATE SIGNED *(MM/DD/YY)*

DD Form 2630-1, Aug 2003

SECURITY CLASSIFICATION

Figure AP2.F17. Example of DD Form 2630-2, "Software Resources Data Report: Initial Developer Report" (Page 1)

SECURITY CLASSIFICATION

SOFTWARE RESOURCES DATA REPORT: INITIAL DEVELOPER REPORT

Form Approved
OMB No. XXXX-XXXX

Due 60 days after contract award and 60 days after start of any release or build.

The public reporting burden for this collection of information is estimated to average 25 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (XXXX-XXXX), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.

PART I. REPORT CONTEXT AND DEVELOPMENT ORGANIZATION

1. SYSTEM/ELEMENT NAME *(Version/Release)*			2. REPORT AS OF *(MM/DD/YY)*
3. AUTHORIZING VEHICLE *(MOU, Contract/Amendment, Etc.)*			4a. REPORTING EVENT
			4b. SUBMISSION # *(Supersedes #* *if applicable)*
5. DEVELOPMENT ORGANIZATION	6a. CERTIFIED CMM LEVEL OR EQUIVALEN	7a. LEAD EVALUATOR	
	6b. CERTIFICATION DATE	7b. EVALUATOR AFFILIATION	
8. PRECEDENTS *(List up to five similar systems by the same organization or team)*			
9. APPLICABLE SOFTWARE RESOURCES DATA REPORT DATA DICTIONARY FILENAME			10. LAST REVISION DATE
11. COMMENTS ON PART I RESPONSES			

PART II. PRODUCT AND DEVELOPMENT DESCRIPTION

	PERCENT OF PRODUCT SIZE A	PLANNED OR ACTUAL DEVELOPMENT PROCESS B	UPGRADE OR NEW? C
12. PRIMARY APPLICATION TYPE:	%		
13. SECOND APPLICATION TYPE:	%		
14. THIRD APPLICATION TYPE:	%		
15. FOURTH APPLICATION TYPE:	%		
16. PRIMARY LANGUAGE USED:	%		
17. SECONDARY LANGUAGE USED:	%		
18. COTS/GOTS APPLICATIONS USED:			
19. PEAK STAFF *(Maximum Team Size in FTE)*			
20. PERSONNEL EXPERIENCE IN DOMAIN HIGHLY EXPERIENCED: % NOMINALLY EXPERIENCED: % INEXPERIENCED/ENTRY LEVEL: %			
21. COMMENTS ON PART II RESPONSES			

PART III. PRODUCT SIZE REPORTING

	ESTIMATE D
22. NUMBER OF SOFTWARE REQUIREMENTS *(not including External Interface Requirements unless noted in associated Data Dictionary)*	
23. NUMBER OF EXTERNAL INTERFACE REQUIREMENTS *(i.e., Not Under Project Control)*	
24. AMOUNT OF REQUIREMENTS VOLATILITY ENCOUNTERED *(on a scale of 1 to 5, where 1 = Very Low and 5 = Very High)*	Not applicable
25. AMOUNT OF DELIVERED CODE DEVELOPED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
26. AMOUNT OF DELIVERED CODE MODIFIED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
27. AMOUNT OF DELIVERED CODE REUSED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
28. COMMENTS ON PART III RESPONSES:	

DD Form 2630-2, Aug 2003

SECURITY CLASSIFICATION

Figure AP2.F17. Example of DD Form 2630-2, "Software Resources Data Report: Initial Developer Report" (Page 2)

SECURITY CLASSIFICATION

SOFTWARE RESOURCES DATA REPORT: INITIAL DEVELOPER REPORT

PART IV. RESOURCE AND SCHEDULE REPORTING

With the month of contract award as month 1, enter the actual or estimated start month, end month, and total labor hours for each activity shown. Together, Items 29 through 35 should account for all direct hours charged to the software development project. Use Item 35 to report any direct hours not accounted for in Items 29 through 34. Explain any contribution of indirect hours in the associated Data Dictionary.	ACTUAL OR ESTIMATED DEVELOPMENT PROCESS		
	START MONTH E	END MONTH F	TOTAL HOURS G
29. SOFTWARE REQUIREMENTS ANALYSIS			
30. SOFTWARE ARCHITECTURE AND DETAILED DESIGN			
31. SOFTWARE CODING AND UNIT TESTING			
32. SOFTWARE INTEGRATION AND SYSTEM/SOFTWARE INTEGRATION			
33. SOFTWARE QUALIFICATION TESTING			
34. SOFTWARE DEVELOPMENTAL TEST AND EVALUATION			
35. ALL OTHER DIRECT SOFTWARE ENGINEERING DEVELOPMENT EFFORT DESCRIBE:			
36. COMMENTS ON PART IV RESPONSES			

PART V. PRODUCT QUALITY REPORTING (OPTIONAL)

37a. REQUIRED OR ACTUAL MEAN TIME TO SERIOUS OR CRITICAL DEFECT (MTTD) AT DELIVERY IN HOURS *(Provide the specific definition of this measure in the associated Data Dictionary.)*
Not applicable to DD Form 2630-2

37b. OBSERVED OR COMPUTED RELIABILITY COMPARED WITH NOMINAL RELIABILITY OF ANALOGOUS SYSTEMS *(Provide details about the analogous systems and define nominal reliability in the associated Data Dictionary.)*
Not applicable to DD Form 2630-2

38. COMMENTS ON PART V RESPONSES
Not applicable to DD Form 2630-2

POINT OF CONTACT (POC) INFORMATION

39a. NAME *(Last, First, Middle Initial)*		39b. DEPARTMENT	39c. TELEPHONE NO. *(Include Area Code)*
39d. E-MAIL ADDRESS	39e. FAX NO. *(Include Area Code)*	39f. SIGNATURE	39g. DATE SIGNED *(MM/DD/YY)*

DD Form 2630-2, Aug 2003

SECURITY CLASSIFICATION

DATA ITEM DESCRIPTION

Title: Software Resources Data Report: Initial Developer Report (DD Form 2630-2)

Number: **Approval Date:** Draft

AMSC Number: **Limitation:**

DTIC Applicable: No **GIDEP Applicable:** No

Office of Primary Responsibility: (D)OSD/PA&E/CAIG

Applicable Forms: Software Resources Data Report: Initial Developer Report (DD Form 2630-2); 40 hours.

Use/relationship: DD Form 2630-2 is used to obtain the expected (estimates-at-completion) characteristics of a software product and its development process. These data will be used to compile a database of software product sizes, schedules, effort, and quality that Government analysts can draw upon to help predict the cost of new systems.

a. Information to be acquired through these data will include the developer's estimates of software product size, development schedule, peak staff, and direct labor hours.
b. The definitions of the data items are negotiable but must include the three categories of size, schedule, and effort. The contractor must provide a dictionary that defines the data elements contained on the negotiated DD Form 2630-2.
c. The definition of the software product is negotiable but should be a named, controlled, testable, and deliverable program, subsystem, or system. A reportable product can be an incremental version, release or full operating capability, whether or not it will complete the overall system or whether or not some requirements will be deferred to a future delivery or upgrade.

The format and specific contents of this report must be tailored to reflect the negotiated data elements, data definitions, and software system definition to enable relevant and economical data reporting. Applicable programs are all ACAT IC and ID programs that contract for (or write a Memorandum Of Understanding for) more than $25 million (in FY 2002) for software. Subcontracts for more than $25 million (in FY 2002) in software development should be reported on separate DD Form 2630-2 submissions, either by the prime contractor or directly by the subcontractor. Subcontracts for less than $25 million (FY 2002) in software development should be included (rolled-up) in the data reported for the prime contract DD Form 2630-2.

Requirements:

1. Reference documents. DoDI 5000.2, "Operation of the Defense Acquisition System," establishes mandatory policies for requiring SRDRs. Detailed instructions for preparing DD Form 2630-2 are contained in Appendix 2 of the CSDR Manual, DoD 5000.4-M-1.

2. *Format*. The DD Form 2630-2 shall be in the format agreed to by the contractor and the Government and specified in the contractor's Software Development/Measurement Plan.
3. *Content*. DD Form 2630-2 shall contain estimated software measurement data as described in the contractor's Software Development/Measurement Plan, data element dictionary, or equivalent.

End of DI-XXXX.

Figure AP2.F18. Example of DD Form 2630-3, "Software Resources Data Report: Final Developer Report" (Page 1)

SECURITY CLASSIFICATION

SOFTWARE RESOURCES DATA REPORT: FINAL DEVELOPER REPORT

Form Approved
OMB No. XXXX-XXXX

Due 60 days after final software delivery and 60 days after delivery of any release or build.

The public reporting burden for this collection of information is estimated to average 35 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (XXXX-XXXX), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ADDRESS.

PART I. REPORT CONTEXT AND DEVELOPMENT ORGANIZATION

1. SYSTEM/ELEMENT NAME *(Version/Release)*			2. REPORT AS OF *(MM/DD/YY)*
3. AUTHORIZING VEHICLE *(MOU, Contract/Amendment, Etc.)*			4a. REPORTING EVENT
			4b. SUBMISSION # *(Supersedes #* *if applicable)*
5. DEVELOPMENT ORGANIZATION	6a. CERTIFIED CMM LEVEL OR EQUIVALEN	7a. LEAD EVALUATOR	
	6b. CERTIFICATION DATE	7b. EVALUATOR AFFILIATION	
8. PRECEDENTS *(List up to five similar systems by the same organization or team)*			
9. APPLICABLE SOFTWARE RESOURCES DATA REPORT DATA DICTIONARY FILENAME			10. LAST REVISION DATE
11. COMMENTS ON PART I RESPONSES			

PART II. PRODUCT AND DEVELOPMENT DESCRIPTION

	PERCENT OF PRODUCT SIZE A	PLANNED OR ACTUAL DEVELOPMENT PROCESS B	UPGRADE OR NEW? C
12. PRIMARY APPLICATION TYPE:	%		
13. SECOND APPLICATION TYPE:	%		
14. THIRD APPLICATION TYPE:	%		
15. FOURTH APPLICATION TYPE:	%		
16. PRIMARY LANGUAGE USED:	%		
17. SECONDARY LANGUAGE USED:	%		
18. COTS/GOTS APPLICATIONS USED:			
19. PEAK STAFF *(Maximum Team Size in FTE)*			
20. PERSONNEL EXPERIENCE IN DOMAIN HIGHLY EXPERIENCED: % NOMINALLY EXPERIENCED: % INEXPERIENCED/ENTRY LEVEL: %			
21. COMMENTS ON PART II RESPONSES			

PART III. PRODUCT SIZE REPORTING

	ACTUAL D
22. NUMBER OF SOFTWARE REQUIREMENTS *(not including External Interface Requirements unless noted in associated Data Dictionary)*	
23. NUMBER OF EXTERNAL INTERFACE REQUIREMENTS *(i.e., Not Under Project Control)*	
24. AMOUNT OF REQUIREMENTS VOLATILITY ENCOUNTERED *(on a scale of 1 to 5, where 1 = Very Low and 5 = Very High)*	
25. AMOUNT OF DELIVERED CODE DEVELOPED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
26. AMOUNT OF DELIVERED CODE MODIFIED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
27. AMOUNT OF DELIVERED CODE REUSED SIZE IN [ ] *(S for physical SLOC, SNC for noncomment SLOC, or other abbreviation and explain in the associated Data Dictionary)*	
28. COMMENTS ON PART III RESPONSES:	

DD Form 2630-3, Aug 2003

SECURITY CLASSIFICATION

Figure AP2.F18. Example of DD Form 2630-3, "Software Resources Data Report: Final Developer Report" (Page 2)

SECURITY CLASSIFICATION

SOFTWARE RESOURCES DATA REPORT: FINAL DEVELOPER REPORT

PART IV. RESOURCE AND SCHEDULE REPORTING

With the month of contract award as month 1, enter the actual or estimated start month, end month, and total labor hours for each activity shown. Together, Items 29 through 35 should account for all direct hours charged to the software development project. Use Item 35 to report any direct hours not accounted for in Items 29 through 34. Explain any contribution of indirect hours in the associated Data Dictionary.	ACTUAL OR ESTIMATED DEVELOPMENT PROCESS		
	START MONTH E	END MONTH F	TOTAL HOURS G
29. SOFTWARE REQUIREMENTS ANALYSIS			
30. SOFTWARE ARCHITECTURE AND DETAILED DESIGN			
31. SOFTWARE CODING AND UNIT TESTING			
32. SOFTWARE INTEGRATION AND SYSTEM/SOFTWARE INTEGRATION			
33. SOFTWARE QUALIFICATION TESTING			
34. SOFTWARE DEVELOPMENTAL TEST AND EVALUATION			
35. ALL OTHER DIRECT SOFTWARE ENGINEERING DEVELOPMENT EFFORT DESCRIBE:			
36. COMMENTS ON PART IV RESPONSES			

PART V. PRODUCT QUALITY REPORTING (OPTIONAL)

37a. REQUIRED OR ACTUAL MEAN TIME TO SERIOUS OR CRITICAL DEFECT (MTTD) AT DELIVERY IN HOURS *(Provide the specific definition of this measure in the associated Data Dictionary.)*
37b. OBSERVED OR COMPUTED RELIABILITY COMPARED WITH NOMINAL RELIABILITY OF ANALOGOUS SYSTEMS *(Provide details about the analogous systems and define nominal reliability in the associated Data Dictionary.)*
38. COMMENTS ON PART V RESPONSES

POINT OF CONTACT (POC) INFORMATION

39a. NAME *(Last, First, Middle Initial)*		39b. DEPARTMENT	39c. TELEPHONE NO. *(Include Area Code)*
39d. E-MAIL ADDRESS	39e. FAX NO. *(Include Area Code)*	39f. SIGNATURE	39g. DATE SIGNED *(MM/DD/YY)*

DD Form 2630-3, Aug 2003

SECURITY CLASSIFICATION

DATA ITEM DESCRIPTION

Title: Software Resources Data Report: Final Developer Report (DD Form 2630-3)

Number: **Approval Date:** Draft

AMSC Number: **Limitation:**

DTIC Applicable: No **GIDEP Applicable:** No

Office of Primary Responsibility: (D)OSD/PA&E/CAIG

Applicable Forms: Software Resources Data Report: Final Developer Report (DD Form 2630-3); 40 hours.

Use/relationship: The DD Form 2630-3 is used to obtain the actual (at complete) characteristics of a software product and its development process. These data will be used to compile a database of software product sizes, schedules, effort, and quality that Government analysts can draw upon to help predict the cost of new systems.

a. Information to be acquired through these data will include the developer's measures of software product size, development schedule, peak staff, direct labor hours, and quality.
b. The definitions of the data items are negotiable but must include the four categories of size, schedule, effort, and quality. The contractor must provide a dictionary that defines the data elements contained on the negotiated DD Form 2630-3.
c. The definition of the software product is negotiable but should be a named, controlled, testable, and deliverable program, subsystem, or system. A reportable product can be an incremental version, release or full operating capability, whether or not it completes the overall system or whether or not some requirements have been deferred to a future delivery or upgrade.

The format and specific contents of this report must be tailored to reflect the negotiated data elements, data definitions, and software system definition to enable relevant and economical data reporting. Applicable programs are all ACAT IC and ID programs that contract for (or write a Memorandum of Understanding for) more than $25 million (in FY 2002) for software. Subcontracts for more than $25 million (in FY 2002) in software development should be reported on separate DD Form 2630-3 submissions, either by the prime contractor or directly by the subcontractor. Subcontracts for less than $25 million (in FY 2002) in software development should be included (rolled-up) in the data reported for the prime contract DD Form 2630-3.

Requirements:

1. *Reference documents*. DODI 5000.2 "Operation of the Defense Acquisition System," establishes mandatory policies for requiring SRDRs. Detailed instructions for preparing DD Form 2630-3 are contained in Appendix 2 of the CSDR Manual, DoD 5000.4-M-1.

2. *Format*. DD Form 2630-3 shall be in the format agreed to by the contractor and the Government as specified in the contractor's Software Development/Measurement Plan or equivalent.
3. *Content*. DD Form 2630-3 shall contain actual software measurement data as described in the contractor's Software Development/Measurement Plan, data element dictionary, or equivalent.

End of DI-XXXXX.

AP2.4. INSTRUCTIONS FOR COMPLETEING DD FORM 2630 SERIES

AP2.4.1. Part I. Report Context and Development Organization

AP2.4.1.1. Items 1 through 4. These four items should be completed for all three forms in the DD Form 2630 series.

AP2.4.1.1.1. Item 1. System/Element Name (Version/Release). This is the name used to refer to the software product being developed, including any applicable version, release, build, or other identifier. Include the name of the Work Breakdown Structure (WBS) element and its associated WBS number.

AP2.4.1.1.2. Item 2. Report As Of. This is the date as of which all other answers are meaningful for this submission of the form. If a subsequent report supersedes a previous report, for example to correct an error, this date would be the retroactive date of the superseded report rather than the current date.

AP2.4.1.1.3. Item 3. Authorizing Vehicle (MOU, Contract/Amendment, Etc.). This is the contract number (if applicable) and amendment number (if applicable), or reference to a memorandum of understanding or other documentation that authorizes the development of the subject software.

AP2.4.1.1.4. Items 4a and 4b. Reporting Event and Submission #. Examples of events that drive the submission are “CARD,” “Project/Release Start,” or “Contract/Release End” corresponding to the DD Form 2630-1, 2630-2, or 2630-3, respectively. Item 4b indicates the specific submission number of this form, so as to identify it in the event that a subsequent form is needed to correct or revise an earlier submission.

AP2.4.1.2. Items 5 through 10. These six items are to be completed only on DD Forms 2630-2 and 2630-3 after the development organization has been identified.

AP2.4.1.2.1. Item 5. Development Organization. For report submissions after contract award, this is the name of the company or organization that is the responsible developer of the software product being developed. The associated SRDR Data Dictionary should be used to explain the mapping of development organizations, software components and DD Form 2630 forms submitted. As with any other customization of this form, agreement on the level of aggregation must be reached between the developer and program office.

AP2.4.1.2.2. Items 6a and 6b. Certified CMM Level or Equivalent and Certification Date. Item 6a is the Software Engineering Institute (SEI) Capability Maturity Model (CMM) number of the level (1 through 5) at which the primary development organization has been formally certified. If no formal certification has been conducted, leave the item blank. If a single submission is used to represent the work of multiple organizations, enter the level of the organization that will be expending the most

amount of effort on the development project (not necessarily the prime contractor) and note this in the associated SRDR Data Dictionary. If the Government has accepted an alternative assessment mechanism, such as the Air Force's Software Development Capability Evaluation (SDCE) or ISO-15504, enter a pointer to the results here and explain the meaning of the assessment in the SRDR Data Dictionary. It is possible for this assessment to change between an initial developer and a final developer submission. In item 6b, enter the date of the certification.

AP2.4.1.2.3. Items 7a and 7b. Lead Evaluator and Evaluator Affiliation. In item 7a, enter the name of the person that led the formal SEI CMM assessment and determined the maturity level indicated. In item 7b, enter the date when the formal assessment associated with the indicated level was conducted. If item 6a is blank, leave these items blank as well.

AP2.4.1.2.4. Item 8. Precedents. List up to five analogous systems developed by the same software organization or development team.

AP2.4.1.2.5. Item 9. Applicable Software Resources Data Report Data Dictionary Filename. The definitions of any customized item or any other clarifying definitions of metrics reported on a submitted DD Form 2630 should be contained within a SRDR Data Dictionary. Submitters shall submit both the DD Form 2630 and the SRDR Data Dictionary as electronic files. Provide the filename of the Data Dictionary associated with this submission in item 9.

AP2.4.1.2.6. Item 10. Last Revision Date. Provide the date the associated Data Dictionary was last revised.

AP2.4.1.2.7. Item 11. Comments on Part I Responses. Provide any comments about entries in items 1 through 10 in this space. More detailed explanations should be included in the associated SRDR Data Dictionary.

AP2.4.2. Part II. Product and Development Description. Except for Column B, Planned or Actual Development Process, and Column C, Upgrade or New, the items in Part II are to be completed for all three forms in the DD Form 2630 series. Columns B and C are not required for DD Form 2630-1, "Software Resources Data Report: Initial Government Report."

AP2.4.2.1. Items 12 through 15. Application Type. Describe the application type(s) being developed using one or more domain names from those listed in Figure AP2.F19, if possible. The primary type (item 12) may be the only application type listed, but any number of application types may be listed. (Space for four is provided on the form but submissions may include any number.) If none of the examples shown in the list of application types are appropriate, enter a phrase to describe the application type and define it in the associated SRDR Data Dictionary. When internal development efforts within a program are large and independent, respondents may choose to report each using a separate DD Form 2630 instead of as various application types within a single report.

AP2.4.2.2. Column C. Upgrade or New? Indicate whether the primary development is new software or an upgrade. A software system is considered new either if no existing system currently performs its function or if the development completely replaces an existing system. A software system that replaces part of an existing system (such as the replacement of a database) should be considered an upgrade. An existing software system that is being ported to a new platform or being reengineered to execute as a Web or distributed application (for example) would be considered an upgrade unless it is also being completely redeveloped from scratch (new requirements, architecture, design, process, code, etc.).

AP2.4.2.3. Percent of Product Size. Column A. Enter the approximate percentage (up to 100%) of the product size that is of the application or language type indicated in items 12 through 17.

AP2.4.2.4. Planned or Actual Development Process. Column B. For application types on DD Forms 2630-2 and 2630-3, this is the name of the development process planned or followed for the application of the system. Use common industry terms, such as waterfall, spiral, or RAD, rather than proprietary names that are internal to the development organization. Do not indicate a software architecture method (such as object-oriented development) or a development tool (such as Rational Rose), as these do not specify a process.

AP2.4.2.5. Items 16 and 17. Language. In item 16, enter the primary computer language in which most of the development is expected to be (or was) conducted. This can be a compiled language, such as FORTRAN, Ada, or C, or it can be an interpreted language, such as Forté. Use the amount of effort spent in development to determine the primary language rather than the amount of function delivered. Explain any interpretation of this item in the associated SRDR Data Dictionary. If a secondary language is used, enter it in item 17.

AP2.4.2.6. Item 18. COTS/GOTS Applications Used. List the names of the applications or products that will (or do) participate in the final delivered product, whether they are Commercial Off-the-Shelf (COTS) or Government Off-the-Shelf (GOTS) products. If a proprietary application or product that is not generally commercially available will be (or was) included, identify it here and include any necessary explanation in the associated SRDR Data Dictionary.

AP2.4.2.7. Item 19. Peak Staff (team size in FTE). Enter the expected or actual peak team size, measured in full-time equivalent staff. Only include direct labor in this calculation unless otherwise explained in the associated SRDR Data Dictionary.

Figure AP2.F19. Application Types

Warfare Mission Areas
- Antiair Warfare
- Antisubmarine Warfare
- Naval Antisurface Ship Warfare
- Amphibious Warfare
- Chemical Warfare
- Biological and Radiological Defense
- Land Warfare
- Special Warfare
- Strategic Warfare
- Tactical Air Warfare
- Electronic Warfare
- Strategic Defense Initiative

Mobility Mission Areas
- Air Mobility
- Land Mobility
- Sea-Surface Mobility
- Undersea Mobility
- Space Mobility

Communications, Command and Control/Intelligence Mission Areas
- Communications, Command and Control
- Intelligence, Including Reconnaissance

Mine and Obstacle Mission Areas
- Land Mine/Obstacle/ Countermeasures
- Sea Mine/Countermine

Mission and System Support Mission Areas
- Logistics
- Manpower, Personnel and Training
- Mission/System Support

Weapon Systems Functions
- Target Acquisition/ Search/Detect
- Threat Evaluation
- Target Tracking
- Weapon Assignment
- Fire Control Acquisition and Designation
- Launch
- Propulsion
- Control
- Flight Controls
- Conventional Munitions/ Weapons
- Directed Energy Weapons
- Hard Target Kill/Anti-Armor
- Fuzing
- Chemical Warfare (Offense)

Defensive Systems Functions
- Hit Avoidance
- Signature Control/Suppression Reduction
- Armor, Infantry and Crew Protection
- EMP Hardening/Survivability from Nuclear Weapons
- Damage Control
- Chemical/Biological Defense
- Deterrence

Mine Functions
- Mine Mooring
- Mine Neutralization/ Destruction

C3I Functions
- Information Management
- Communication
- Guidance/Navigation/Position Location
- Avionics/Vetronics/ Display Systems

Electronic Warfare Functions
- Electronic Countermeasures
- Jamming
- Deception
- Cryptography
- Electronic Counter Countermeasures
- Low Probability
- Electromagnetic Signal Measurement/Intelligence
- Jam Resistance

Assessment/Analysis Functions
- Simulation
- Weapons and Munitions Effects/Target Kill Assessment
- Vulnerability Analysis

RDT&E Functions
- Energetic Materials
- Manufacturing Technology
- Electronics
- Other Than Electronics
- Materials Development
- Metals, Ceramics, Organics and Composites
- Electronics
- Test Equipment/Technology
- Structural
- Electronics
- Reliability
- Maintainability
- Structures, Including Design and Manufacture
- Missile
- Aircraft
- Hull
- Body/Chassis

Miscellaneous Functions
- Multi-Function Applications
- Robotics
- Human Factors/Human Engineering
- Artificial Intelligence/Adaptive Systems
- Basic Scientific Research/ University Interactions

Supply/Support/Construction Functions
- Material Distribution and Payload Handling/Supply Systems
- Training
- Field Services (Water, Food, Tents, etc.)
- Bridging/Obstacles
- Support and Auxiliary Equipment
- Habitability
- Environmental Effects
- Facility Construction

Management/Personnel Functions
- RDT&E Management
- Acquisition Management
- Financial Management
- Medical/Casualty Care
- Performance Appraisal

Other Embedded Functional Areas
- Avionics
- Audio Signal Processing and Enhancement
- Command and Control
- Command, Control and Information
- Command, Control, Communications and Information
- Command, Control, Communications, Computers and Information
- Digital Signal Processing
- Guidance and Control
- Image Processing and Enhancement
- Operational Flight Program
- Simulation
- Telemetry
- Target Seeking
- Embedded Trainer Software
- Embedded Weapon

Other Software System Functions
- Decision Support
- Financial, Accounting, Bookkeeping, Payroll, etc.
- Information System
- Management Information System
- Personnel, Human Resources, etc.
- Operating System
- Online Training or Education Software

AP2.4.2.8. Item 20. Personnel Experience in Domain. The percentage of project personnel that were or are expected to be highly experienced in the project domain (3 or more years of experience), nominally experienced in the project domain (1 to 3 years of experience), and inexperienced in the project domain (0 to 1 year of experience). The percentages reported at each level should take into consideration the duration each person works on the project (so that, for example, a single highly experienced person who works on the project for two years constitutes the same percentage of the total as two entry level people who each contribute one year of effort). A person's experience level is rated at the time he or she begins work on the project or the increment being reported. Thus, that experience gained between the initial and final reports of a project or increment is not counted towards the rating.

AP2.4.2.9. Item 21. Comments on Part II Responses. Provide any comments about entries in items 12 through 20 in this space. More detailed explanations should be included in the associated SRDR Data Dictionary.

AP2.4.3. Part III. Product Size Reporting. The items in Part III ask for quantitative information about the size of the software development. For DD Form 2630-1, provide estimates in the CARD for the relevant release or delivery in Column D. For DD Form 2630-2, provide estimates-at-completion for the relevant release or delivery in Column D. For DD Form 2630-3, provide actual values for the delivery or release covered by this report in Column D.

AP2.4.3.1. Item 22. Number of Software Requirements. This is the number of requirements satisfied or to be satisfied by the developed software product. In the initial reports (DD Form 2630-1 and 2630-2), provide estimates of the total number of requirements to be implemented by the software being developed. In the final DD Form 2630-3, provide the actual number of requirements implemented by the developed software using the same counting method as was used in the estimating reports. Do not count requirements concerning external interfaces not under project control (see item 23). Explain any details about the requirements counting methods in the SRDR Data Dictionary.

AP2.4.3.2. Item 23. Number of External Interface Requirements. This is the number of external interface requirements not under project control that the developed system will satisfy. External interfaces include interfaces to computer systems, databases, files, or hardware devices with which the developed system must interact but which are defined externally to the subject system. In the initial reports (DD Form 2630-1 and 2630-2), provide estimates of the total number of interface requirements to be handled by the software to be developed. If the developed system interfaces with an external system in multiple ways (such as for reading data and also for writing data), then each unique requirement for interaction should be counted as an interface requirement. In the final DD Form 2630-3, provide the actual number of interface requirements handled by the developed software using the same counting method as was used in the initial reports. Explain any details about the counting methods for external interface requirements in the SRDR Data Dictionary.

AP2.4.3.3. Item 24. Amount of Requirements Volatility Encountered. As part of the final DD Form 2630-3 report, indicate the amount of requirements volatility encountered during development using a qualitative scale (very low, low, nominal, high, very high) relative to similar systems of the same type. This should be a relative measure rather than an absolute one in order to understand how initial expectations were or were not met during the course of the software development.

AP2.4.3.4. Item 25 through 27. Amount of Delivered Code Developed, Modified, and Reused. These three items are intended to capture the size of the system under development by partitioning (exhaustive with no overlaps) the code into three categories. (Any customization of this form should maintain a partitioning categorization to avoid double counting or omissions in the delivered code size measurement.) The configuration control system is assumed to be the repository for completed code. (Unless otherwise explained in the associated SRDR Data Dictionary, code that is developed but not maintained under a configuration control system is not to be considered part of the developed system.) Only the most recent version of each code unit should be counted. The following three subparagraphs provide details. For each of these three items, also enter the abbreviation for the size measure used in the blank provided, as explained in subparagraph AP2.4.3.4.4.

AP2.4.3.4.1 Item 25. Amount of Developed Code Delivered. Most software projects utilize a combination of new, reused, and generated code to accomplish the required function. Any code that was developed specifically for this project, or was reused or generated by tools but then extensively modified (more than 25% of the lines changed or added), is considered new code. Code generator inputs prepared by hand, such as tables or scripts, are also counted as new code.

AP2.4.3.4.2. Item 26. Amount of Delivered Code Modified. Source code that was generated by tools or obtained from outside the project (even if within the same organization) and was then reused with minor modifications (less than 25% modified) by this project is reported under this item. If modifications were substantial (more than a notional 25%), the code is counted as new (item 25). This assessment should be done at the code unit level and not across the whole project.[6]

AP2.4.3.4.3. Item 27. Amount of Delivered Code Reused. Source code that was obtained from outside the project (even if within the same organization) or that was generated by tools and not modified at all is reported under item 6.

AP2.4.3.4.4. Size in S, Snc, or Another Measure. The preferred size measures are as follows: “S” for total physical source lines of code or carriage returns, “Snc” for

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6 As a simplistic example, if a 100,000-line project consists of 100 units of 1,000 lines each, and 30 of those units each have 100 modified lines (each unit being 10% modified), then that entire collection of 30,000 lines should be considered modified code. However, if another 20 units each have 300 modified lines (each unit being 30% modified), then that entire collection of 20,000 lines should be considered new code.

noncommented and nonblank source lines of code, and "LS" for number of logical source statements. If another size measure is used, provide an abbreviation for it in the space provided and briefly explain it in item 28. For example, unadjusted function points, adjusted function points, object points, feature points, classes, algorithms, or other functional measures could be indicated. Use the SRDR Data Dictionary for longer explanations, if required. The size measure chosen should allow independent verification of the project size by examining the software products produced by the development. For this reason, unless a post-hoc analysis of functional size will be conducted to compare with estimated function points or other functional size estimates, one of the source code counting methods is preferred as a size measure, where "code" can refer to any hand-edited product such as lines of a computer language or lines in tables used to configure a reusable product. Many models normalize to SLOC, which is a convenient common denominator for describing product size, even if the initial planning is done using another measure, such as function points, objects, classes, screens, algorithms, etc. However, developed code size may be expressed in other terms if SLOC is a meaningless measure of the output for the majority of the programmer effort (such as when developing a Web page using an iconographic tool interface). As with other customizations, the selected size measure should be in accordance with the approved Software Resources Data Collection Plan, developed by the CWIPT.

AP2.4.3.5. Item 28. Comments on Part III Responses. Provide any comments about the responses to items 22 through 27 in this space. More detailed explanations should be included in the associated SRDR Data Dictionary.

AP2.4.4. Part IV. Resource and Schedule Reporting. Project development is typically broken down into phases or activities. This part can be customized to include the names of the phases or activities that are appropriate for the subject development.

AP2.4.4.1. Items 29, 30, 31, 32, 33, and 34. Software Development Activities. Items 29 through 34 under Part IV are taken from the activity definitions used in ISO12207 and are intended to be generic to any software development (though they may not be strictly associated with development phases by the same names). These activities may be performed simultaneously, sequentially, or both. The two initial reports (the DD Form 2630-1 and the DD Form 2630-2) include estimates of the schedule and total effort applied to each activity. The final report contains actual schedules and total efforts for each activity. Many of the activities will overlap, even in a waterfall style of development. In an iterative or spiral development, activities may start and stop. To the extent that is sensible for the approach used (or expected), the month numbers are the earliest and latest that each activity occurred (or is estimated to occur). Month numbers, starting with month one at the time of Contract Award, are shown in the first two columns.[7]

[7] For builds or releases that do not begin at the start of a project, such as a build subsequent to an initial build, the starting month number can be greater than one for schedule estimation or reporting purposes.

AP2.4.4.2. Item 35. Other Direct Software Engineering Development Effort. Item 35 is for any direct project hours that are not accounted for in the previous six items. (Schedule is not applicable to this item.) In the text space provided, summarize the kinds of activities included, such as project management, IV and V, configuration management, quality control, problem resolution, library management, process improvement, measurement, training, documentation, data conversion, or supporting a customer-run acceptance test. Also include software delivery, installation, deployment and/or implementation, to the extent these activities are included in the development contract. If any allocated direct charges are applied to a project, they should be included in this item. The contribution of any indirect hours is described in the comment block or in the SRDR Data Dictionary (e.g., training, process improvement, methodology research) but not included in these totals.

AP2.4.4.3. Item 36. Comments on Part IV Responses. Provide any comments about the responses to items 29 through 35 in this space. More detailed explanations should be included in the associated SRDR Data Dictionary.

AP2.4.5. Part V. Product Quality Reporting (Optional). No reporting of product quality is needed for DD Form 2630-2. For DD Forms 2630-1 and 2630-3, respond to either item 37a or 37b concerning required or actual (measured or computed) quality. The sample forms suggest quantifying quality operationally (through failure rate and defect discovery rate). However, other methods may be used if appropriately explained in the associated SRDR Data Dictionary. The CWIPT may deem quality reporting to be inappropriate to a particular project. If so, a project may omit Part V in its reports in the DD Form 2630 series.

AP2.4.5.1. Item 37a. Required or Actual Mean Time to Serious or Critical Defect (MTTD) at Delivery. MTTD at time of delivery is one method by which a customer can specify nominal product quality. The definition of this measure must include whether minor or only major (mission compromising) defects are counted, and whether recurring known defects or only new ones are counted. Also, the operational time basis must be clarified, such as by indicating whether a system is operational only eight a day or continuously, or whether a system operates in a single instance or in multiple instances at different locations simultaneously. Use the associated SRDR Data Dictionary to clarify the counting method. At contract end, an actual measure of software quality can be reported. The example DD Form 2630-3 includes examples of how delivered product quality may be reported. Item 37a is an example of a quantitative measure of quality using the observed or computed interval between serious or critical defect discoveries. (An example of five defect categories can be found in the superseded MIL-STD-498. Developers may customize these definitions to conform to their existing definitions.) Developers should use existing procedures for distinguishing defects from routine development changes, such as problems found after an inspection, after a configuration control baseline, or after advancement to the next state of a development process.

AP2.4.5.2. Item 37b. Observed or Computed Reliability Compared With Nominal Reliability of Analogous Systems. An alternative method to specifying nominal quality is

to compare the required or actual reliability of the system being reported on with the typical reliability for systems of this type. For example, if the system is an operational flight program (OFP), higher than nominal reliability might be expected for the OFP of a fly-by-wire aircraft.[8] On the other hand, if the OFP were to control a pilotless vehicle, such as a surveillance or drone aircraft, the required reliability might be lower than average for OFP systems. A customization of this item could allow the response to be in terms relative to other similar systems; for example, a scale such as "much higher," "somewhat higher," "nominal," "lower," or "much lower" might be appropriate. As with any customization, the explanation of the data must be included in the SRDR Data Dictionary.

AP2.4.5.3. Item 38. Comments on Part V Responses. Provide any comments about the responses to items 37a or 37b in this space. More detailed explanations should be included in the associated SRDR Data Dictionary.

AP2.4.6. Point of Contact (POC) Information. All three forms conclude with an area for providing point of contact information for the person to handle any inquiries about the data submitted, plus the date of completion.

AP2.4.6.1. Item 39a through 39g. Point of Contact (POC) Information. Enter the following information for the person to contact for answers to any questions about entries on DD Forms 2630-1, 2630-2 and 2630-3: last name, first name, and middle initial (item 39a); department name (39b); telephone number, including area code (39c); e-mail address (39d); fax number, including area code (39e); signature (39f); and date signed (usually later than the "as of" date in Part I) (39g).

8 See also Figure AP2.F17.